

PROPER MOTIONS OF FOUR VARIABLE STARS OF
THE U GEMINORUM TYPE AND STARS IN THEIR VICINITY

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ABSTRACT. The proper motions of the four U Geminorum-type stars SS Aur, X Leo, TW Vir, and UZ Ser are derived from 1st epoch plates taken in 1935 by Kozlov with the Tashkent normal astrograph and 2nd epoch plates taken by the author with the same instrument.

In addition the author presents a catalogue of relative proper motions for 1946 stars to the 15th photographic magnitude located near the four U Geminorum stars. The proper motion of the variable star R Leo was also determined.

As a result of his proper motion studies, the author also found some binary and multiple star systems among the background stars investigated.

Variable stars of the U Geminorum type are some of the most interesting /24 objects of the galaxy. The spectra of these stars vary from the early classes B and A at maximum to late classes G and K at minimum and at intervals between outbursts resemble the spectra of new stars, and at the maximum brightness, the spectra of white dwarfs, which is why they are sometimes called quasi-periodic new dwarfs. If the stars of the type U Geminorum can be considered dwarfs, then the distance to them should not be more than several tens of parsecs. The determination of the proper motions of U Geminorum stars is of great interest in finding their absolute stellar magnitudes and the study of their spatial distributions.

In the present paper are presented proper motions of the variables SS Aurigae, X Leonis, TW Virginis, and UZ Serpentis, and also a catalogue of the relative proper motions of 1946 stars to the 15th photographic magnitude in the vicinity of these variables. The photographs of V. I. Kozlov, taken in 1935 with the Tashkent normal astrograph ($D = 330$ mm, $F = 3470$ mm), were used as the first epoch for the derivation of the proper motions of the stars. The photographs of the second epoch were obtained by us on the same instrument

using the "through-glass" method. The data on the observational material are presented in Table 1.

All pairs, except the first, were measured on the Repsold instrument of the Astronomical Institute of the Academy of Sciences, Uzbek SSR, and the third pair of the TW Virginis region on the UIM-21, No. 630351, which was adapted for this purpose. All stars acceptable for measurement and lying within a central circle of radius of about 40 mm were measured.

In the region of X Leonis the variable star R Leonis appeared at a distance of 56 mm from the center. Therefore in addition 16 stars around this star were measured for the determination of its proper motion.

From 30 to 60 reference stars, uniformly distributed over the entire field, were selected in each region for deriving the plate constants. Based on the rectangular coordinates x and y and the differences Δx and Δy between the images of the first and second epochs, the equations of condition were formulated as follows:

$$\left. \begin{array}{l} ax + by + c + \tau\mu_x = \Delta x \\ a'x + b'y + c' + \tau\mu_y = \Delta y \end{array} \right\} \quad (1)$$

without taking into account higher order terms, since the conditions of the observations and also the optical centers of the plates of the two epochs coincide.

Solving the system (1) without the terms $\tau\mu$ by the method of least squares, we found the constants of pairs of plates: a, b, c, a', b', c' , and then calculated the relative proper motions of each star. /25

The proper motion of R Leonis was determined from two groups of reference stars: 32 reference stars distributed in the central circle, and 16 stars around R Leonis. The convergence of the values found appeared to be good within the limits of the errors. Therefore the value of the proper motion obtained with the aid of the constants of the central circle are presented in the catalogue.

Simultaneously with the measurement of the difference in coordinates on the conditional scale the diameters of the star images in each pair on the plates of the second epoch were estimated. The transfer from the conditional scale to the standard photographic stellar magnitudes was carried out with

the help of special photometric plates obtained on the same normal astrograph together with the reference areas of the Mount Wilson catalogue [1].

TABLE 1

Region	Pair	Number of the plate	Dates of observations	Difference in epochs, years	Exposure, minutes	Hour angle, minutes	Type of plate
SS Aur	I	95	27.II 1935	28.06	40	120	Ilford
		1542	21.III 1963	30	120		Astro-Agfa
	II	96	27.II 1935	28.06	40	168	Ilford
		1543	21.III 1963	30	168		Astro-Agfa
	III	90	26.II 1935	60	165		Ilford
		1954 ^a	3.II 1965	45	165		Astro-Agfa
X Leo	I	98	28.II 1935	29.93	15	-92	Ilford
		1952	3.II 1965	15	-92		Astro-Agfa
	II	99	28.II 1935	15	-71		Ilford
		1953	3.II 1965	15	-71		Astro-Agfa
	III	100	28.II 1935	15	-50		Ilford
		1954	3.II 1965	15	-50		Astro-Agfa
TW Vir	I	108	30.III 1935	29.92	120	-44	Ilford
		1972	2.III 1965	90	50		Astro-Agfa
	II	110	31.III 1935	120	04		Ilford
		2018	3.V 1965	70	15		Astro-Agfa
	III	111	2.IV 1935	120	50		Ilford
		1995	30.III 1965	90	50		Astro-Agfa
UZ Ser	I	137	7.VII 1935	29.00	120	12	Ilford
		1835	6.VII 1964	90	12		Astro-Agfa
	II	142	25.VII 1935	120	22		Ilford
		2045	29.VI 1965	80	22		Astro-Agfa

The technique of obtaining photometric plates and their reduction are expounded in the paper [2]. The characteristic curves for the various regions, constructed from the diameters of the star images and their international magnitudes, are presented in Figure 1, where the characteristic curve I is for the stars of the standard region and curve II, for the intervening stars in the region under investigation. The field error was not taken into account since previous investigation [3] showed that the effect of the field error of the photographic objective of the normal astrograph is negligible within the limits of a 100 x 100 mm field. The probable errors of the brightness determination of the stars are given below:

Region	ρ_m
SS Aur	± 0.31
X Leo	± 0.19
TW Vir	± 0.18
UZ Ser	± 0.22

It is evident from this that the stellar magnitudes obtained by us are sufficiently accurate for the determination of the brightness equation and for other purposes.

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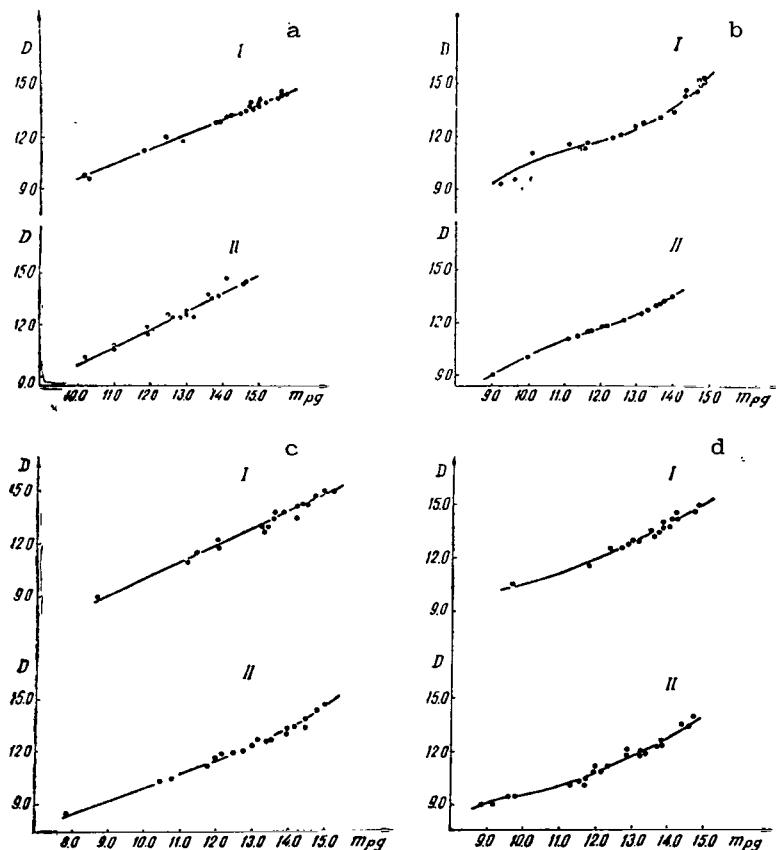


Figure 1. Characteristic curves for brightness determination for the stars in the regions:
 a - SS Aur; b - X Leo; c - TW Vir; and
 d - UZ Ser.

The proper motions of stars can often be distorted by errors in the brightness equation which depends on various factors (the quality of the guiding, variation in the collimation of the objective between observations at the two epochs, and so forth). For the detection of this error we investigated the proper motions of stars for each pair separately by the method expounded in the paper [4].

The values found for the differences P_x to \bar{P}_x and P_y to \bar{P}_y , between pairs of all the regions differ little among themselves; therefore we averaged the values of these differences both in x and in y for the corresponding groups of stars in all pairs in each region, and then constructed the characteristic curve (Figure 2). The numerical values of the corrections taken from these curves are presented in Table 2; these corrections were not included in the proper motions of the stars mentioned above.

The probable errors of the proper motion of each star were calculated from the well-known Peter's equation

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$$\rho = \pm 0.8454 \frac{\sqrt{p}}{1+p} \cdot \frac{\sum |\Delta|}{n-1}, \quad (2)$$

where

- 1 is the weight of the worst pair;
- p is the weight of the pair under investigation;
- $\sum |\Delta|$ is the sum of the absolute values of the differences of the proper motions for the two pairs being investigated; and
- n is the number of stars for which the probable error is calculated.

A. N. Deich [5] showed that if the pairs of plates of the region under investigation are obtained with an identical difference in epochs and have an identical limiting stellar magnitude, then the weight of each pair can be calculated from the reference stars. It is evident from Table 1 that the pairs in all investigated regions satisfy these conditions. Therefore the weights for each pair were determined from the reference stars. Our calculations also showed that all pairs of these regions are practically uniform. On account of this the probable errors of proper motion of the individual star for these four regions were found from the simplified Peter's equation

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$$\rho = \pm 0.4227 \frac{\sum |\Delta|}{n-1}. \quad (3)$$

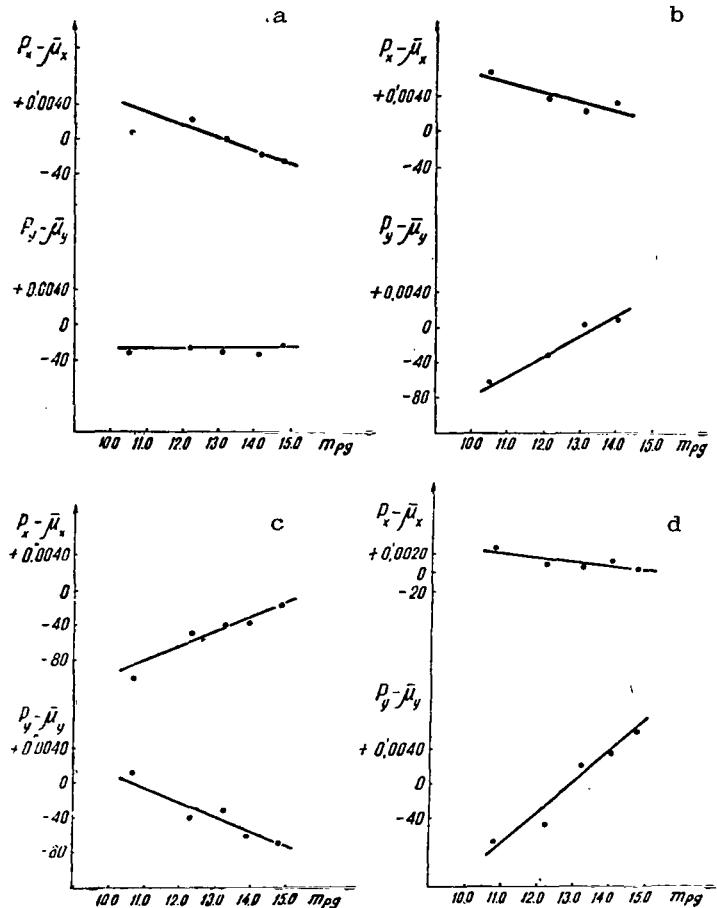


Figure 2. Characteristic curves of the brightness equation for the regions:

a - SS Aur; b - X Leo; c - TW Vir;
d - UZ Ser.

We present the results of these calculations:

Region	ρ_x (0.0001)	ρ_y (0.0001)
SS Aur	± 24	± 21
X Leo	± 22	± 20
TW Vir	± 21	± 22
UZ Ser	± 22	± 21

The transfer of the relative proper motions to absolute values was carried out by a statistical method. The errors, taking into account the parallactic shift of the reference stars, are taken from the papers [6 and 7], and the values of the coefficients Q and Q', which take into account the galactic rotation, are taken from Zhukov's Table [8].

Thus we obtained for the variable stars of the U Geminorum type the values of the proper motion (Table 3).

TABLE 2

m_{pg}	SS Aur		X Leo		TW Vir		UZ Ser	
	$\Delta\mu_x$	$\Delta\mu_y$	$\Delta\mu_x$	$\Delta\mu_y$	$\Delta\mu_x$	$\Delta\mu_y$	$\Delta\mu_x$	$\Delta\mu_y$
9.5	+60	-2	—	—	—	—	—	—
9.8	56	2	+36	-74	—	—	—	—
10.0	52	1	32	58	—	—	+32	-120
10.2	48	-1	30	62	—	—	-30	112
10.5	44	0	27	56	-84	+60	28	104
10.8	40	0	24	48	78	56	26	96
11.0	36	0	21	42	74	52	22	88
11.2	32	0	18	38	68	46	20	80
11.5	28	0	15	32	62	42	18	72
11.8	24	0	12	26	56	38	16	66
12.0	20	0	10	20	50	34	14	60
12.2	16	0	8	16	44	30	12	54
12.5	12	0	+ 4	- 8	38	26	10	46
12.8	8	0	0	0	32	22	8	38
13.0	+4	0	- 2	+ 6	26	18	6	28
13.2	0	0	4	12	20	14	4	18
13.5	-4	0	8	18	14	10	+ 2	- 8
13.8	8	0	10	24	8	6	0	0
14.0	12	0	12	28	- 2	+ 2	- 2	+ 4
14.2	16	+1	-14	+32	+ 4	- 2	4	12
14.5	20	1	—	—	10	6	6	20
14.8	24	2	—	—	16	10	8	30
15.0	-28	+2	—	—	+22	+14	-10	+40

NOTE. The value of the brightness equation is given to 0.0001.

The proper motions of TW Virginis and X Leonis have been determined by other authors [9], [10]. The results of these determinations are given below:

Star	Δt (in years)	μ (0.0001)	Author
X Leo	10.5	952	Miczaika and Becker
TW Vir	10.1	820	Rosino

TABLE 3

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Star	Proper motions			
	Relative		Absolute	
	μ_x	μ_y	μ_x	μ_y
SS Aur	+0.0032	-0.0206	+0.0029	-0.0279
X Leo	-241	+37	-343	-27
TW Vir	+299	-153	+194	-184
UZ Ser	+20	-135	+22	-163

TABLE 4

Number of the stars	m_{pg}	X	Y	μ_x ($0.^{\circ}.001$)	μ_y ($0.^{\circ}.001$)	r
Region SS Aur						
39	14. ^m 2	-39.4	-25.6	+22	+8	0.1
40	13.6	-39.4	-25.7	+18	+4	
65	12.3	-35.5	-26.0	+15	+13	
83	14.0	-32.8	-25.0	+17	+14	3.0
145	13.5	-25.9	-0.8	+1	+14	
147	12.9	-25.7	-1.8	+1	+14	1.2
171	14.2	-23.6	-12.9	+14	+11	
185	14.1	-22.3	-15.2	+12	+10	2.8
810	11.9	+31.7	+9.6	-16	-8	4.2
834	12.3	+35.4	+7.6	-18	-7	
13*	13.8	+3.0	-21.4	-11	-54	
14*	8.6	+5.5	-18.2	-7	-47	4.1
21*	11.4	+25.4	+11.4	-15	-35	
22*	10.2	+30.4	+8.7	-15	-39	5.7
Region X Leo						
51	13.6	-10.0	+9.6	-27	+8	3.4
53	13.6	-9.6	+13.0	-29	+12	
2*	9.0	-55.0	-30.4	-64	+30	1.0
3*	10.2	-54.9	-30.3	-68	+24	
Region TW Vir						
13	12.3	-23.0	+12.2	-39	+6	9.0
5*	13.5	-23.2	+3.2	-43	+2	
19	12.9	-17.1	+21.8	+13	-20	
30	13.5	-11.0	+15.6	+14	-20	8.7
36	13.4	-7.4	+20.9	+12	-19	6.4
51	11.8	+0.1	+18.6	-18	+22	0.7
52	13.4	+0.1	+17.9	-20	+18	
65	13.6	+3.8	+22.7	-19	+26	5.5
85	15.2	+18.2	+19.6	-3	+22	
86	15.1	+18.8	+21.6	-1	+21	2.1
Region UZ Ser						
167	15.0	-16.9	+12.8	-21	-4	0.3
175	15.0	-16.6	+12.8	-23	-8	
214	14.8	-13.2	+13.7	+2	+28	
215	14.6	-13.2	+13.8	+4	+24	0.1
216	15.0	-13.0	0.0	-18	-3	
221	14.8	-13.0	-0.1	-22	-3	0.2
375	15.0	-0.3	-9.9	-18	-8	
396	14.2	+1.6	-10.3	-18	-2	2.1
716	15.0	+24.6	-7.0	+25	+3	
718	15.0	+24.7	-7.3	+24	0	0.3

In addition to the equatorial coordinates of the variable stars their proper motions obtained from plates of the Heidelberg Observatory with a difference in epochs of about 10 years are also presented in the paper [9]. It is obvious from Table 2 of this paper that the positions of the stars for which the authors calculated proper motions are determined rather roughly.

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Mannino and Rosino [10], reducing the very same material, independently of each other arrived at identical results. This observational material was obtained with a reflector ($D = 600$ mm, $F = 2100$ mm) with a difference in epochs of 9.7 years. Such a difference in epochs at a scale of $98''/\text{mm}$ is not sufficient for the determination of reliable proper motions of stars.

Incidentally, we investigated the proper motions of background stars for detecting stars physically connected with each other. The investigation was carried out with the method presented in the paper [2]. As a result, some binary and multiple systems were found in these four regions of the sky, and data on them are presented in Table 4.

The relative proper motions of the stars in the vicinity of the variables SS Aurigae, X Leonis, TW Virginis, and UZ Serpentis are given in the catalogue presented below. In the first column are given the numbers of the stars (the numbers of the reference stars are denoted by asterisks). The stars in each region are numbered according to increase in the coordinate X. In the second column the photographic stellar magnitude on the international scale is given. In the third and fourth columns the rectangular coordinates X and Y are given. In each region the optical center of the plate is taken as the origin of the rectangular coordinates or the variable star, if it is located close to the optical center. In the last two columns the relative proper motions of the stars in thousandths of seconds of arc are given. The stars with large proper motions are numbered separately and are presented at the end of each region.

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CATALOGUE

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No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
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Region SS Aur

 $\alpha_{1950} = 06^h 09^m 3$ $\delta_{1950} = +47^\circ 36'$

1	13.4	-49.5	+ 3.1	0	+ 4	51*	13.1	-38.5	+ 3.8	+ 6	+ 4
2	14.1	-48.6	+ 1.5	+ 14	+ 10	52	13.6	-38.5	+ 3.8	+ 6	+ 6
3	13.5	-48.4	- 2.2	+ 15	+ 5	53*	13.1	-38.4	+ 18.8	+ 9	+ 14
4	12.8	-48.0	- 9.2	+ 1	+ 3	54	12.9	-37.5	+ 23.2	0	+ 8
5	13.2	-47.2	+ 4.3	+ 10	+ 11	55	12.2	-37.3	-14.9	- 5	+ 4
6	13.8	-46.5	- 2.8	+ 5	- 5	56	9.6	-37.0	+ 4.5	+ 10	+ 7
7	13.3	-46.5	-12.8	+ 13	- 24	57	14.1	-36.8	+ 13.0	+ 8	- 2
8	12.8	-46.2	+ 4.7	+ 15	- 5	58	14.0	-36.6	+ 13.8	+ 16	- 3
9	12.5	-46.1	+10.9	- 7	+ 7	59	13.0	-36.5	+ 6.3	- 8	- 7
10	13.8	-45.7	-10.8	+ 24	- 23	60	14.1	-36.4	+ 0.9	+ 10	- 1
11	13.2	-45.6	- 2.9	+ 5	+ 12	61	13.8	-36.3	+ 5.7	- 3	+ 9
12	13.8	-45.3	- 9.8	+ 3	+ 6	62	13.3	-36.0	-12.9	+ 19	- 16
13	12.2	-45.2	- 1.6	- 3	+ 2	63	13.3	-35.9	-12.3	+ 16	+ 3
14	13.7	-44.9	+ 8.9	- 3	+ 7	64	14.2	-35.9	-16.6	+ 4	+ 7
15*	12.7	-44.9	- 6.0	+ 3	+ 5	65	12.3	-35.5	-26.0	+ 15	+ 13
16	13.3	-44.8	-15.8	+ 3	+ 7	66	12.6	-35.5	+ 10.8	0	- 2
17	11.0	-44.5	- 9.2	+ 17	- 14	67	14.3	-35.3	- 1.8	+ 8	+ 6
18	14.3	-44.6	-17.6	+ 8	- 8	68	10.2	-34.9	-11.6	+ 3	+ 2
19	12.0	-43.5	+15.2	+ 8	+ 3	69	14.5	-34.6	- 4.2	+ 1	- 3
20	14.5	-44.3	- 4.1	+ 6	+ 7	70	12.5	-34.5	+ 9.2	+ 1	+ 6
21	14.5	-43.3	- 5.8	+ 8	+ 12	71	13.1	-34.5	+ 20.8	+ 2	+ 5
22	13.8	-43.1	+10.0	+ 21	+ 7	72	13.0	-34.5	-32.6	+ 4	+ 4
23	13.4	-42.7	- 4.7	+ 21	+ 10	73	13.2	-34.3	-21.7	+ 6	+ 4
24	14.0	-42.7	-11.6	+ 16	+ 0	74	13.9	-33.7	-10.6	+ 1	+ 3
25	13.8	-42.5	-19.8	+ 6	+ 3	75	14.5	-33.5	+ 5.3	- 2	+ 1
26	13.1	-42.5	- 6.2	+ 9	- 2	76	13.7	-33.5	+ 22.0	+ 7	+ 6
27	11.6	-42.4	+16.0	+ 4	- 7	77	13.8	-33.4	+ 18.8	+ 7	+ 11
28	14.5	-42.3	- 6.6	+ 5	+ 2	78*	13.1	-33.4	-15.4	- 6	- 3
29	11.6	-42.0	-25.8	- 7	+ 1	79*	13.1	-33.1	-26.1	- 7	+ 3
30	13.6	-41.8	+11.8	+ 6	+ 7	80	13.5	-33.1	-29.0	+ 15	+ 5
31	12.7	-41.4	- 0.7	+ 6	+ 5	81	13.2	-32.8	+ 1.5	- 2	- 13
32	13.1	-40.6	+19.8	-10	+ 6	82	14.2	-32.8	-18.6	+ 7	+ 15
33	12.2	-40.5	- 8.6	- 2	0	83	14.0	-32.8	-25.0	+ 17	+ 14
34	12.7	-40.4	-17.6	+ 3	+ 9	84*	13.6	-32.7	+10.4	+ 8	+ 7
35	13.0	-40.1	-26.0	0	+ 7	85	12.5	-32.7	+22.4	- 9	- 3
36	14.2	-39.8	-25.6	+14	+ 2	86	13.1	-32.7	-26.6	+ 7	+ 9
37	14.3	-39.7	+ 4.9	+11	+ 4	87	11.9	-32.5	+ 9.7	- 8	- 5
38	13.1	-39.6	-24.4	+ 8	+ 8	88	14.4	-32.4	-32.4	+ 8	+ 13
39	14.2	-39.4	-25.6	+22	+ 8	89	14.1	-32.3	+19.8	+10	+ 10
40	13.6	-39.4	-25.7	+18	+ 4	90	14.5	-32.3	-22.8	+ 2	+ 9
41	12.0	-39.3	- 8.1	0	- 23	91	13.1	-32.2	-33.2	+ 6	+ 1
42	14.1	-39.1	- 3.4	- 0	- 28	92	12.8	-32.1	0	+13	+ 4
43	13.2	-39.1	+18.6	+ 5	- 4	93	13.8	-32.0	-31.0	0	+ 12
44	12.4	-39.0	+12.8	-17	- 15	94	11.2	-31.9	-31.8	- 5	+ 1
45	12.0	-38.9	+25.5	+13	+ 16	95	12.6	-31.7	-29.6	+11	- 4
46	12.9	-38.9	-27.7	+12	+ 9	96	13.8	-31.7	-11.2	+ 4	- 12
47	13.4	-38.8	+ 6.3	+ 6	0	97	13.1	-31.6	+17.8	+ 7	+ 9
48	14.2	-38.6	+ 4.9	+ 8	+ 8	98	14.3	-31.6	+17.5	+ 7	+ 10
49	13.3	-38.6	+16.3	+ 8	+ 8	99	13.4	-31.1	+27.7	- 3	+ 12
50	13.8	-38.6	+26.0	+ 8	+ 13	100	14.2	-31.1	+16.5	+ 5	- 28

Continuation of the CATALOGUE

No. of the star	m_{pg}	x	y	μ_x	μ_y	No. of the star	m_{pg}	x	y	μ_x	μ_y
101	9.6	-30.5	-33.8	-17	-18	153	13.6	-25.4	-29.0	+ 6	- 5
102	13.3	-30.4	+ 1.3	+ 6	+ 5	154	11.3	-25.4	-12.6	+ 7	- 17
103	10.7	-30.3	-22.8	- 2	-12	155	14.4	-25.4	-22.9	+ 6	+ 6
104	12.6	-30.2	+29.8	+ 8	+ 3	156	12.2	-25.1	-18.1	+12	- 5
105	14.4	-30.2	+13.4	+20	+ 14	157	13.5	-25.1	-35.4	+ 5	+ 2
106	14.8	-30.1	- 2.1	+ 1	- 1	158	13.0	-25.0	-26.2	+19	- 12
107	12.9	-30.0	-15.4	-16	- 9	159*	14.1	-25.0	+16.4	- 4	+ 6
108	14.5	-29.8	-37.1	+ 4	+ 6	160	12.0	-24.9	-30.8	+ 4	+ 7
109	12.9	-29.7	-35.9	+ 5	+ 6	161	13.5	-24.7	-33.6	+ 5	+ 4
110	14.6	-29.7	-18.3	- 2	- 2	162	14.8	-24.5	+11.5	+13	+ 5
111*	13.7	-29.7	- 3.9	+ 1	+ 6	163	14.5	-24.5	+ 2.4	+ 5	+ 6
112	14.4	-29.5	+ 2.4	+14	+ 5	164	14.5	-24.4	+ 6.2	- 9	+ 2
113	12.3	-29.2	+10.0	+ 5	- 2	165	14.2	-23.9	-12.6	+12	+ 2
114	14.3	-29.2	+17.4	+ 6	+ 12	166*	13.0	-23.9	+32.4	- 2	- 6
115	14.3	-29.1	+31.4	+13	+ 4	167	13.5	-23.8	-18.8	+ 5	+ 5
116	14.0	-29.0	-10.5	+ 5	+ 2	168	13.8	-23.7	-27.0	+ 4	+ 3
117	14.3	-28.9	+ 3.8	- 2	-11	169	14.3	-23.7	+ 4.5	+12	- 10
118	14.4	-28.8	+ 8.4	+ 6	+ 4	170	14.7	-23.7	-19.9	+ 1	+ 5
119	14.4	-28.7	-34.5	+10	+ 4	171	14.2	-23.6	-12.9	+14	+ 11
120	12.8	-28.6	-35.5	- 5	+ 3	172	12.8	-23.3	-28.2	+ 4	+ 2
121	14.1	-28.5	+30.9	+14	- 1	173	14.8	-23.1	-25.5	+10	+ 8
122	14.4	-28.4	-29.0	+ 9	- 2	174	11.9	-23.0	+17.0	+ 6	- 1
123	13.8	-28.3	+22.7	- 1	+ 3	175	12.2	-23.0	+15.8	- 6	+ 5
124	9.6	-28.3	+ 3.0	+11	+ 19	176	15.0	-22.7	-41.6	+ 5	+ 9
125	14.1	-28.3	-20.6	+ 3	- 2	177	14.1	-22.7	-23.1	+ 5	- 1
126	12.0	-28.2	-18.1	- 5	- 6	178	11.0	-22.6	-29.8	+ 2	+ 2
127	14.6	-28.1	-22.2	+ 2	+ 3	179	14.1	-22.5	-33.6	+ 9	- 4
128	13.8	-27.9	-36.6	- 3	+ 6	180	14.3	-22.3	+15.4	- 2	0
129	14.6	-27.7	+12.4	0	- 1	181	14.5	-22.2	+16.0	+ 2	+ 12
130	14.5	-27.7	-11.6	+10	+ 11	182	14.2	-22.3	-25.6	+15	+ 10
131	12.0	-27.5	-23.6	- 2	+ 1	183	14.5	-22.1	- 4.8	- 4	+ 8
132	13.5	-27.4	+10.7	+ 6	+ 9	184	12.2	-22.1	-12.4	+ 7	- 16
133	12.3	-27.3	- 2.3	+ 5	- 4	185	14.1	-22.3	-15.2	+12	+ 10
134	14.5	-27.3	+17.5	0	+ 8	186	14.5	-22.3	+26.3	+ 6	+ 4
135	14.3	-27.0	- 1.4	+ 4	- 6	187	13.3	-21.8	-41.4	+ 5	+ 4
136	13.5	-26.8	+21.8	+ 1	- 5	188	14.4	-21.7	+23.3	- 4	+ 5
137	14.1	-26.7	-10.1	+ 6	- 6	189	13.8	-21.6	-10.2	- 1	+ 1
138	14.1	-26.7	-13.5	+ 7	+ 6	190	12.6	-21.5	- 5.1	+ 3	+ 5
139*	13.3	-26.5	-13.4	- 3	+ 1	191	14.2	-21.5	+13.1	+ 7	- 6
140	14.5	-26.5	+17.0	- 1	+ 4	192	13.9	-21.4	- 5.1	+ 3	+ 19
141	13.1	-26.5	+28.7	+ 4	+ 7	193	14.8	-21.3	-28.1	0	+ 2
142	13.0	-26.2	-19.5	- 3	- 1	194	13.0	-21.3	-32.8	+12	- 5
143	14.0	-26.3	+ 7.9	+ 6	+ 2	195*	12.6	-21.0	-24.8	+ 7	- 1
144	13.8	-26.0	-34.6	- 6	0	196	14.9	-20.7	-29.6	+ 1	+ 4
145	13.5	-25.9	- 0.8	+ 1	+ 14	197	13.0	-20.7	-33.2	+ 7	- 1
146	13.8	-25.7	+ 3.0	+ 3	+ 4	198	13.8	-20.6	-34.6	+ 7	+ 15
147	12.9	-25.7	- 1.8	+ 1	+ 14	199	14.4	-20.6	+ 9.5	- 6	+ 3
148	11.4	-25.7	-25.5	0	+ 4	200	13.7	-20.5	-30.4	0	+ 3
149	11.5	-25.7	+33.4	+ 6	- 6	201	12.9	-20.5	+ 3.6	- 3	+ 7
150	10.3	-25.6	+ 8.9	+12	- 7	202	12.5	-20.4	+ 0.1	- 1	+ 2
203	13.7	-20.3	-15.6	+ 8	+ 12	204	14.5	-20.3	-13.6	+10	+ 4
205	14.0	-20.3	-35.4	+12	+ 2						

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No. of the star	m_{pg} *	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
206	13.1	-19.9	-3.1	+ 4	- 3	258	14.5	-15.5	+ 8.8	+ 4	+ 7
207	9.9	-19.7	-5.1	0	-24	259	13.6	-15.5	+ 0.8	0	+ 1
208	12.6	-19.7	-14.4	0	- 9	260*	13.5	-15.5	+39.9	+ 1	+ 3
209	14.2	-19.6	-13.6	+ 1	+ 11	261	13.1	-15.4	-20.2	+ 5	+ 9
210	12.9	-19.5	-9.6	+ 5	+ 6	262	13.0	-15.3	-4.9	- 3	- 1
211*	12.9	-19.3	-10.8	- 6	+ 11	263	13.5	-15.2	-12.9	+19	- 4
212	13.8	-19.3	+ 7.3	+12	+ 6	264	13.7	-15.2	+26.8	- 9	+ 1
213	10.9	-19.3	-43.5	0	- 4	265	13.0	-14.9	-38.8	- 4	- 10
214	13.8	-19.1	-24.5	+10	+ 4	266	14.6	-14.8	-16.8	- 8	+ 3
215	13.1	-19.1	+11.7	- 4	+ 7	267	13.3	-14.7	+16.5	- 7	+ 2
216	12.9	-19.1	-7.3	+ 3	+ 2	268	13.3	-14.7	+24.3	+ 8	+ 2
217	13.6	-18.9	-6.2	0	+ 1	269	14.1	-14.3	+28.2	+ 3	+ 2
218	12.8	-18.7	-10.4	- 5	+ 1	270	13.8	-14.5	+23.8	- 5	+ 1
219	14.2	-18.6	-13.1	+ 6	- 1	271	13.1	-14.5	+ 4.2	+ 2	+ 4
220	14.6	-18.6	-16.0	+ 6	+ 3	272	14.0	-14.5	-0.7	- 3	- 10
221	13.1	-18.5	+ 4.4	- 4	+ 3	273	13.8	-14.5	-23.9	+11	- 2
222	11.0	-18.5	-28.6	- 6	-13	274	13.8	-14.4	+ 1.0	+ 4	+ 7
223	12.3	-18.4	-34.0	- 4	-17	275	12.5	-14.4	+ 3.4	- 1	- 7
224	13.6	-18.0	+ 3.1	+17	-12	276	13.8	-14.3	+ 6.7	+ 2	+ 2
225	13.2	-18.0	-19.6	+ 2	+ 7	277	14.2	-14.3	-0.3	+ 2	- 4
226	14.6	-18.0	-19.6	+16	+ 5	278	13.7	-14.1	-9.8	- 1	- 13
227*	13.1	-17.9	+11.1	-14	- 8	279	13.0	-14.1	+34.0	+ 5	- 3
228*	13.4	-17.9	+15.8	+ 3	+ 3	280	13.8	-14.0	-24.3	- 5	0
229	13.2	-17.7	-41.8	+ 2	+ 7	281	13.6	-13.9	+41.4	+ 4	+ 15
230	13.9	-17.7	-6.2	+13.	-13	282	12.9	-13.9	+40.3	- 4	+ 11
231	12.4	-17.7	+40.4	+ 2	+ 17	283	12.8	-13.7	-42.6	+ 5	- 3
232	13.8	-17.6	+22.4	+ 2	- 2	284	13.0	-13.7	-26.8	+ 9	+ 3
233	14.6	-17.6	+23.4	+ 6	0	285	13.1	-13.6	-41.0	- 1	- 12
234*	13.0	-17.6	-43.6	- 1	+ 5	286	12.3	-13.6	-34.4	+ 6	- 7
235	14.4	-17.5	-37.8	- 1	-11	287	13.6	-13.6	+21.9	+ 5	+ 5
236	12.9	-17.5	-29.6	+ 2	+ 9	288	13.5	-13.3	+16.0	+ 6	+ 7
237	13.9	-17.5	-26.0	+ 5	+ 9	289	14.7	-13.0	-10.1	0	0
238	14.6	-17.4	-22.2	- 2	- 3	290	13.7	-12.7	+34.8	- 1	+ 5
239	13.6	-17.3	-8.8	0	+ 1	291	13.1	-12.7	-11.2	- 7	0
240	13.8	-17.3	-0.8	+ 4	+ 9	292	12.6	-12.6	+ 0.1	- 2	+ 5
241	13.6	-17.2	-26.2	+10	+ 10	293	14.1	-12.6	-25.9	+19	- 9
242*	12.8	-17.1	-33.3	-12	-18	294	14.5	-12.5	-41.6	+17	+ 11
243	11.4	-17.0	+33.4	- 6	- 3	295	14.1	-12.5	-33.3	+ 9	+ 8
244	13.8	-16.8	+15.5	+ 1	+ 3	296	13.1	-12.3	-43.8	+ 5	0
245	13.1	-16.7	-33.2	+ 4	+ 2	297	14.3	-12.3	+13.4	- 6	0
246	13.7	-16.7	-17.3	+ 5	- 8	298	13.2	-12.3	-26.8	+ 1	0
247	12.8	-16.7	-23.5	-12	-18	299	12.7	-12.3	-25.9	- 1	+ 1
248	14.3	-16.4	-22.4	+19	- 2	300	12.6	-12.2	+23.8	+ 6	- 5
249	14.4	-16.4	-28.4	+ 8	+ 3	301	12.8	-11.8	-40.0	+ 8	- 6
250	14.5	-16.3	-4.1	- 3	+ 9	302*	12.8	-11.8	+ 3.6	0	+ 4
251	13.9	-16.1	+30.2	0	+ 4	303	14.5	-11.8	-3.2	- 3	+ 14
252	14.8	-15.9	-38.8	+16	+ 5	304	12.3	-11.8	-23.4	+ 4	0
253	12.7	-15.8	+ 2.4	-10	0	305*	13.7	-11.7	-18.2	+ 9	+ 7
254	12.9	-15.8	-2.0	+ 3	+ 4	306	14.1	-11.7	+20.6	+10	+ 4
255	14.0	-15.7	-23.6	0	+ 7	307	14.5	-11.6	-33.6	+ 6	+ 2
256	12.2	-15.7	-43.1	0	+12	308	14.1	-11.5	-29.8	+ 6	+ 3
257	13.8	-15.5	+ 4.9	+ 5	+ 0	309	14.1	-11.5	-30.0	+10	+ 4
						310	14.1	-11.4	-19.1	+ 2	- 2

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No. of star	m_{pg}	x	y	μ_x	μ_y	No. of star	m_{pg}	x	y	μ_x	μ_y
311	10.9	-10.8	+36.0	+11	-8	364*	13.7	-7.4	+41.7	-5	-4
312	14.0	-10.7	+5.4	-3	+11	365	13.4	-7.4	-13.0	-1	+1
313	11.4	-10.7	+24.1	+2	-12						
314	14.6	-10.6	-15.0	-6	+1	366	14.2	-7.4	-8.1	-8	+2
315	14.3	-10.6	-25.4	+13	+6	367	12.7	-7.4	+1.8	+12	+4
						368	14.3	-7.3	-44.7	+1	+2
316	13.7	-10.5	-9.5	+1	+3	369	14.6	-7.3	-15.4	+10	+4
317	13.8	-10.5	+16.4	-1	0	370	13.8	-7.2	+22.4	0	-1
318	14.5	-10.5	-41.6	+5	+9						
319	13.8	-10.4	-8.6	+7	-1	371	13.8	-7.1	+1.6	+3	-4
320	14.3	-10.4	+4.3	-8	-2	372	11.0	-7.1	+41.3	-6	-3
						373	14.2	-7.0	+29.2	+7	+8
321	13.8	-10.4	-33.8	+7	+8	374	14.8	-6.9	-34.4	+10	-7
322	14.6	-10.4	-34.4	+5	-3	375	11.8	-6.9	+5.4	-4	+6
323	13.8	-10.3	-22.6	-2	+4						
324	11.1	-10.2	-31.6	+4	-17	376	12.8	-6.7	-2.1	-3	+1
325	12.3	-10.2	+16.4	-10	+3	377*	12.7	-6.7	-3.2	+4	-11
						378	13.9	-6.7	-13.2	0	+6
326	12.8	-10.2	+14.0	+6	+6	379	14.6	-6.7	+39.5	+3	+3
327	14.0	-10.1	+24.1	-1	+10	380	14.2	-6.5	-14.8	+1	+1
328	13.5	-9.9	-40.6	-7	+10						
329	13.7	-9.7	-22.5	-17	+19	381	14.7	-6.5	-33.8	+15	+4
330	13.8	-9.7	-34.8	+1	+2	382	14.6	-6.5	-44.5	-4	0
						383	14.1	-6.3	-21.8	+2	+4
331	13.1	-9.6	+20.6	+8	-6	384	12.9	-6.2	-19.7	-1	0
332	13.0	-9.5	+42.4	0	+7	385	13.7	-6.2	-18.7	+2	+2
333	13.6	-9.5	+32.3	+8	+5						
334	12.4	-9.4	-29.6	+7	+8	386	13.7	-6.1	+1.7	+1	+2
335	12.5	-9.3	-4.1	-7	+7	387	14.5	-6.1	+21.9	+9	+1
						388	13.5	-6.1	-40.6	+1	-1
336	14.0	-9.3	-37.9	-4	-5	389	13.2	-6.1	-43.0	+6	+4
337	12.2	-9.1	+7.9	+1	-4	390	13.4	-5.9	+27.7	-3	-4
338	14.6	-9.0	-40.6	-3	-4						
339	12.0	-9.0	+33.5	-2	+9	391*	13.2	-5.8	+10.0	+10	-5
340	13.7	-8.9	+10.6	+7	+9	392	13.1	-5.8	-42.5	+3	+1
						393	13.6	-5.7	-42.5	+8	+6
341	12.9	-8.7	+37.3	+3	-3	394	13.0	-5.6	+38.2	+10	+5
342	12.8	-8.7	-38.0	+5	0	395	14.5	-5.5	-47.6	+12	+6
343	12.4	-8.7	-36.6	+5	+1						
344	12.2	-8.7	-2.6	-2	-13	396	14.3	-5.5	-30.7	-1	-6
345	13.8	-8.7	-21.2	-4	+3	397	11.7	-5.5	+1.1	+2	0
						398	10.2	-5.4	+39.9	-8	+8
346	12.9	-8.6	+6.8	-1	-1	399	14.2	-5.3	-1.3	-5	+7
347	13.8	-8.6	+17.4	-7	+5	400	13.9	-5.3	+11.4	+2	-4
348	13.8	-8.6	+13.7	+14	+9						
349	14.3	-8.5	-8.8	-5	+5	401	14.0	-5.3	-28.6	-10	0
350	14.3	-8.5	-13.6	-5	-4	402	14.0	-5.0	+15.8	+6	+5
						403	13.4	-4.7	+4.5	-2	-2
351	13.0	-8.5	-34.2	+8	+9	404	13.8	-4.6	+2.7	+2	-1
352*	12.5	-8.4	+27.4	+1	+4	405	13.9	-4.6	+2.0	-1	+7
353	11.7	-8.3	+17.4	+31	+8						
354	12.7	-8.1	-10.3	-16	-11	406	14.2	-4.5	+9.8	-7	+2
355*	12.5	-8.0	-9.3	-15	+1	407	13.0	-4.4	+26.2	+4	-15
						408	12.2	-4.3	-30.6	-10	-9
356	13.8	-7.9	-8.7	+5	-2	409	13.4	-4.3	-16.9	-1	+1
357*	12.2	-7.8	-44.4	-3	0	410	12.6	-4.1	-17.6	-3	-7
358	13.2	-7.7	-3.7	0	+4						
359	12.2	-7.7	-11.9	+2	+8	411*	13.0	-4.1	-25.3	+3	+3
360	11.2	-7.7	+36.3	-2	-2	412*	13.6	-4.1	+15.0	+1	-2
361	13.7	-7.6	+40.2	+2	+6	413	14.4	-4.1	-2.2	-13	+3
362	14.6	-7.3	-15.4	-4	+13	414	13.1	-4.0	+37.0	+6	+3
363	12.8	-7.5	-47.6	-6	+12	415	14.3	-3.9	+5.4	-3	+7

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No. of the star	m_{pg}	x	y	μ_x	No. of the star	m_{pg}	x	y	μ_x	μ_y	
416	14.5	-3.9	-35.4	+ 4	- 5	468	11.8	0	+28.4	- 2	0
417	12.0	- 3.8	- 3.0	+ 7	+ 1	469	12.7	+ 0.1	- 8.2	- 1	- 29
418	14.2	- 3.7	-40.9	+ 5	+ 2	470	14.1	+ 0.1	+34.8	- 4	- 4
419	14.3	- 3.6	+17.0	+ 6	+ 3						
420	13.2	- 3.6	+ 0.9	- 5	+ 8	471	14.1	+ 0.1	+36.2	+15	- 8
						472	14.1	+ 0.1	+ 6.2	- 5	+ 4
421	14.8	- 3.6	+ 3.7	+ 6	- 18	473*	12.5	+ 0.3	+ 3.5	- 1	+ 1
422	12.7	- 3.6	+35.4	- 3	- 1	474	12.6	+ 0.3	+16.6	- 2	0
423	14.2	- 3.5	-43.4	+13	+ 14	475	14.0	+ 0.3	-10.3	- 3	+ 9
424	13.4	- 3.4	- 0.7	+14	- 12						
425	14.5	- 3.3	+26.7	+ 1	+ 3	476	11.9	+ 0.4	-22.0	- 1	- 4
						477	13.2	+ 0.4	+31.1	+ 6	+ 4
426	13.2	- 3.2	+ 8.0	- 4	- 4	478	13.0	+ 0.4	-40.4	+ 2	0
427	14.5	- 3.1	+11.6	+ 2	+ 2	479	11.8	+ 0.6	+19.3	+ 9	- 4
428	14.2	- 3.1	+28.4	-14	+ 4	480	13.0	+ 0.6	+ 4.3	+ 1	+ 2
429	14.8	- 3.1	+ 3.8	+ 4	+ 7						
430	13.7	- 2.9	-22.1	+10	+ 4	481	14.5	+ 0.7	-25.0	- 1	+ 7
						482*	13.4	+ 0.9	+17.2	0	0
431	14.1	- 2.9	+ 2.3	+ 5	- 4	483	13.6	+ 1.0	+16.7	- 1	+ 6
432	7.6	- 2.7	-10.0	+10	+ 15	484	14.3	+ 1.0	- 6.8	- 3	+ 7
433	11.8	- 2.6	+40.4	- 5	- 4	485	13.0	+ 1.0	-40.7	0	- 5
434*	12.9	- 2.5	-17.6	- 1	- 7						
435	14.9	- 2.5	-33.7	+ 4	- 7	486	11.5	+ 1.1	- 3.6	- 7	- 8
						487	14.1	+ 1.3	-29.6	- 1	+ 5
436	13.5	- 2.4	- 4.4	- 5	- 3	488	14.5	+ 1.5	- 1.6	+ 7	- 10
437	14.6	- 2.3	+19.8	+ 2	+ 4	489	14.1	+ 1.5	+29.6	- 6	- 13
438	12.8	- 2.3	- 1.4	- 1	+ 5	490	13.6	+ 1.5	+ 7.6	+ 5	+ 7
439*	12.2	- 2.3	+38.4	0	- 9						
440	13.0	- 2.3	-13.5	- 1	+ 7	491	13.5	+ 1.7	-46.8	+ 2	+ 8
						492	11.7	+ 1.8	+ 1.1	-12	- 3
441	14.5	- 2.2	+ 6.1	-12	- 4	493	12.2	+ 1.9	-28.7	0	- 6
442	14.4	- 2.1	- 8.4	+ 2	+ 5	494	14.2	+ 1.9	+18.8	- 4	+ 1
443	14.5	- 2.0	- 4.0	+10	- 2	495	13.7	+ 2.0	+23.6	+ 2	+ 3
444	14.6	- 2.0	+11.5	- 4	0						
445	14.0	- 1.7	-12.3	- 3	+ 5	496	14.3	+ 2.0	+ 0.7	- 2	+ 4
						497	12.9	+ 2.0	-22.4	+ 3	+ 2
446	14.8	- 1.6	+26.7	+10	- 3	498	14.4	+ 2.1	-24.5	- 4	+ 3
447	14.4	- 1.5	-19.7	+ 1	+ 5	499	13.4	+ 2.2	+23.6	+ 6	- 1
448	14.6	- 1.5	+16.2	+ 2	+ 5	500	14.1	+ 2.3	-38.3	+ 2	+ 4
449*	13.0	- 1.5	-33.7	+13	- 1						
450	11.8	- 1.5	- 4.8	- 8	- 1	501	13.7	+ 2.3	+39.4	+ 2	- 14
						502	13.8	+?2.6	+21.9	+ 6	- 5
451	14.1	- 1.4	+21.7	+ 2	+ 6	503	14.2	+ 2.6	+36.2	+ 3	- 4
452	12.2	- 1.4	- 3.8	- 7	+ 4	504	14.3	+ 2.8	-27.8	- 5	+ 8
453	13.7	- 1.3	+40.5	+12	+ 3	505*	13.8	+ 2.9	+ 7.7	+ 3	- 2
454	12.5	- 1.2	+32.5	- 2	+ 8						
455	14.3	- 1.1	- 4.6	- 3	- 4	506	14.4	+ 2.9	+13.4	- 8	+ 12
						507	14.4	+ 3.0	+13.2	-15	+ 14
456	14.4	- 1.1	+20.8	- 2	+ 2	508	13.2	+ 3.4	-25.0	- 2	+ 2
457	14.1	- 0.9	-41.9	- 2	+ 1	509	13.2	+ 3.4	-25.2	- 6	+ 3
458	13.9	- 0.7	+38.0	+ 4	- 3	510	13.0	+ 3.4	-18.9	-16	+ 7
459	10.2	- 0.6	+22.2	+ 9	- 3						
460	13.0	- 0.5	+11.8	+ 3	- 3	511	14.1	+ 3.5	+10.0	+ 2	0
						512	13.0	+ 3.5	+27.7	- 2	+ 5
461	11.7	- 0.4	+14.6	+ 5	+ 13	513	12.6	+ 3.5	+31.4	- 8	- 1
462	13.7	- 0.3	- 6.8	- 3	+ 4	514	11.9	+ 3.6	-28.1	- 4	- 2
463	14.0	- 0.3	-12.1	+ 3	+ 6	515	13.9	+ 3.8	-14.2	+ 3	+ 6
464	13.0	- 0.2	+39.5	+ 2	+ 3						
465*	13.5	- 0.2	+31.9	0	+ 5	516	13.1	+ 4.2	- 4.6	- 6	+ 3
						517	12.7	+ 4.4	- 9.6	- 4	- 24
466	13.0	- 0.1	+ 4.8	- 9	+ 8	518	13.0	+ 4.5	-27.6	-14	- 10
467	12.7	0	+14.0	-10	+ 12	519	13.0	+ 4.7	-39.4	+ 2	0
						520	14.1	+ 4.7	+13.8	- 1	- 3

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No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
521	12.2	+ 4.7	- 4.6	- 6	+ 2	573	11.4	+ 9.0	- 1.6	+ 2	- 8
522	13.8	+ 4.7	+ 35.8	+ 26	- 21	574	13.8	+ 9.1	- 7.6	- 4	+ 3
523	13.3	+ 4.8	+ 37.4	- 1	+ 3	575	14.4	+ 9.3	+ 8.2	+ 2	- 1
524	13.4	+ 4.8	+ 1.8	+ 9	0						
525	12.5	+ 4.9	- 43.4	+ 8	- 15	576	14.5	+ 9.3	+ 26.5	+ 1	- 9
						577	14.6	+ 9.4	+ 25.7	+ 1	- 2
526	13.0	+ 4.9	- 39.2	- 6	- 3	578	14.5	+ 9.4	+ 26.7	+ 8	- 25
527	12.9	+ 5.0	- 17.1	0	+ 6	579	14.8	+ 10.0	- 43.0	+ 9	+ 4
528	13.1	+ 5.0	- 3.1	+ 7	+ 5	580*	13.4	+ 10.2	- 43.2	+ 1	+ 1
529	12.9	+ 5.1	- 31.6	+ 1	+ 1						
530*	13.8	+ 5.1	- 3.2	- 3	- 1	581	13.3	+ 10.3	- 42.6	+ 10	+ 2
						582	13.1	+ 10.3	- 28.8	+ 3	- 2
531	14.3	+ 5.3	+ 21.0	0	+ 7	583*	13.1	+ 10.3	- 8.6	- 1	- 3
532	12.4	+ 5.3	+ 27.1	- 5	- 1	584	14.5	+ 10.4	- 4.6	+ 2	+ 10
533	11.2	+ 5.3	+ 11.4	+ 1	- 10	585	14.7	+ 10.4	- 37.8	- 4	+ 2
534	14.4	+ 5.4	- 17.4	- 4	+ 1						
535	14.3	+ 5.5	+ 1.1	- 11	- 4	586	14.8	+ 10.5	- 36.4	- 2	+ 7
						587	13.8	+ 10.6	+ 14.8	+ 5	0
536	14.1	+ 5.6	+ 26.8	- 5	- 2	588	14.3	+ 10.6	+ 6.6	+ 1	0
537	12.5	+ 5.7	- 38.8	0	- 8	589	13.1	+ 10.9	- 30.8	0	- 2
538	13.4	+ 5.7	- 36.5	+ 9	- 18	590	13.0	+ 11.3	- 40.6	- 3	- 1
539	14.3	+ 5.9	- 3.5	- 3	+ 13	591	14.5	+ 11.3	- 38.4	+ 5	- 2
540	14.4	+ 6.2	+ 9.4	+ 2	- 5	592	14.5	+ 11.4	- 12.8	- 6	+ 2
						593*	14.0	+ 11.4	+ 4.6	+ 5	+ 1
541	12.7	+ 6.3	- 33.4	+ 2	- 5	594	13.6	+ 11.5	+ 14.4	- 6	+ 2
542	12.2	+ 6.5	- 24.6	+ 3	- 19	595	13.0	+ 11.6	+ 29.1	+ 5	- 1
543	14.5	+ 6.5	- 15.8	0	+ 4						
544	14.5	+ 6.5	- 17.6	+ 5	+ 3	596	14.3	+ 11.6	- 8.6	- 9	- 3
545	13.1	+ 6.6	- 42.0	+ 5	- 1	597	14.6	+ 11.7	+ 8.8	+ 8	- 4
						598	12.3	+ 11.8	- 26.2	- 4	+ 3
546	12.5	+ 6.6	- 38.3	+ 13	- 2	599	12.7	+ 11.9	- 38.2	+ 3	- 10
547	13.8	+ 6.6	- 12.3	- 6	+ 2	600	12.5	+ 11.9	+ 23.6	- 2	- 5
548	14.3	+ 6.7	- 0.1	+ 5	+ 9						
549	14.3	+ 6.8	+ 16.2	- 1	+ 1	601	13.1	+ 11.9	- 1.1	+ 1	- 11
550	14.6	+ 6.9	+ 28.4	- 5	+ 2	602	12.9	+ 11.9	- 1.6	- 5	+ 3
						603	13.0	+ 12.1	- 19.4	+ 11	- 5
551	13.6	+ 7.0	- 3.3	0	+ 3	604	14.0	+ 12.1	- 41.6	+ 6	- 4
552	13.4	+ 7.3	- 16.6	+ 1	+ 5	605	14.2	+ 12.3	+ 7.3	+ 2	- 3
553	13.6	+ 7.5	+ 35.4	+ 5	+ 3						
554*	13.8	+ 7.6	+ 12.4	+ 3	+ 2	606	12.2	+ 12.3	+ 1.2	- 15	+ 3
555	13.0	+ 7.6	+ 23.4	+ 2	- 1	607	12.4	+ 12.4	- 2.0	- 11	+ 8
						608	14.6	+ 12.4	- 13.2	+ 15	- 5
556*	13.7	+ 7.7	- 27.5	- 5	+ 16	609	14.8	+ 12.4	- 12.3	+ 11	- 8
557	11.3	+ 8.1	+ 27.7	+ 3	+ 11	610	13.0	+ 12.4	+ 28.7	+ 2	- 5
558	13.8	+ 8.3	+ 4.8	- 14	+ 6						
559	11.0	+ 8.3	- 12.9	+ 11	- 16	611	11.8	+ 12.4	- 33.6	+ 4	- 6
560*	13.4	+ 8.4	- 17.3	+ 2	+ 3	612	14.3	+ 12.5	- 43.5	- 1	- 8
						613	13.1	+ 12.6	+ 29.5	- 8	- 1
561	13.7	+ 8.4	- 21.0	+ 1	+ 1	614*	12.2	+ 12.6	+ 12.8	+ 5	- 7
562	12.0	+ 8.4	+ 5.9	- 14	- 17	615	14.8	+ 12.6	- 15.6	- 5	- 18
563	14.1	+ 8.4	+ 33.2	+ 4	+ 4						
564	12.9	+ 8.5	+ 38.5	- 6	0	616	14.2	+ 12.7	- 22.6	+ 4	- 5
565	13.9	+ 8.5	+ 24.5	0	0	617*	13.6	+ 12.7	+ 31.9	+ 1	+ 2
						618	13.8	+ 12.8	- 21.9	+ 4	0
566	14.3	+ 8.3	+ 26.0	+ 3	- 5	619	14.2	+ 12.8	- 13.6	- 1	- 5
567	14.0	+ 8.6	+ 1.9	- 2	+ 3	620	14.6	+ 12.8	- 3.5	- 6	- 2
568	12.2	+ 8.7	- 26.6	+ 11	- 6						
569	14.2	+ 8.7	+ 26.0	+ 2	+ 1	621	13.1	+ 13.0	+ 25.6	- 1	+ 6
570	12.5	+ 8.8	+ 9.8	- 8	- 2	622	14.1	+ 13.0	+ 34.8	0	+ 3
						623	13.8	+ 13.1	+ 32.4	+ 3	+ 12
571	14.1	+ 8.8	+ 16.5	- 1	- 3	624	13.1	+ 13.3	+ 11.1	+ 5	+ 2
572	14.5	+ 8.9	- 16.1	- 3	+ 10	625	14.0	+ 13.4	- 20.6	+ 13	+ 19

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No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y	
626	11.9	+13.4	-8.2	-6	+	4	678	13.8	+18.5	-32.7	+	6
627	12.6	+13.4	-41.8	-5	+	2	679	13.4	+18.5	+2.3	-	0
628*	13.8	+13.5	+39.0	+3	+	14	680*	13.4	+18.6	+3.0	-	1
629	14.8	+13.5	-27.7	+14	+	11						
630	12.5	+13.7	-25.6	+9	+	9	681	12.6	+18.6	-34.6	+	1
							682	13.4	+18.6	+19.3	+	7
631	13.2	+13.7	-5.7	-2		0	683	13.0	+18.7	-27.2	-	3
632	12.5	+13.8	+20.8	-13	-	1	684	14.1	+18.7	-30.0	-	0
633	13.4	+14.1	-4.6	-12	+	13	685	14.2	+18.7	-13.2	-	6
634	14.2	+14.2	+18.7	+4	+	2						
635*	13.8	+14.2	+23.7	-5	+	1	686	10.4	+18.8	-20.9	-	6
							687	14.5	+18.8	-16.2	+	6
636	13.8	+14.5	-35.9	+4		0	688	12.7	+19.1	-11.8	-	19
637	12.7	+14.5	-29.0	-5	-	6	689	13.4	+19.3	-6.0	-	12
638	13.4	+14.5	-25.1	-8	-	1	690	12.8	+19.3	+10.4	-	1
639	14.4	+14.6	+16.4	+4	+	2						
640	11.3	+14.7	+19.7	+1	-	7	691*	13.2	+19.3	-35.5	+	2
							692	13.2	+19.4	+21.0	+	1
641	13.9	+14.7	-33.7	-8	+	3	693	13.1	+19.5	-37.9	+	2
642	13.2	+14.7	-35.6	0	-	10	694	14.0	+19.5	-19.9	+	18
643	14.0	+14.7	-37.6	+2	-	1	695	13.2	+19.5	-19.9	+	13
644	14.1	+14.7	+30.7	-4	-	1						
645	15.0	+14.8	+24.4	-2	+	4	696	12.6	+19.6	+30.0	-	2
							697	14.1	+19.6	-31.0	-	5
646	14.2	+14.9	+24.6	-7	-	6	698	14.1	+19.7	-31.0	-	8
647	13.4	+15.0	+7.5	+4	-	3	699	12.1	+19.7	-5.8	-	10
648	13.5	+15.3	-0.9	-5	+	6	700	13.9	+19.8	-14.1	+	7
649	13.9	+15.4	-21.0	-1	+	3						
650	12.5	+15.4	-16.2	-4	-	8	701	12.6	+19.9	+29.8	+	7
							702	14.0	+19.9	-20.6	-	1
651	13.7	+15.4	+18.1	-10	-	2	703	12.7	+19.9	+11.4	-	10
652	14.4	+15.5	-26.5	+8	-	3	704	13.1	+20.0	-27.0	0	+
653	12.2	+15.5	-35.6	+4	-	4	705	14.5	+20.2	+21.3	+	2
654	13.4	+15.6	-37.6	+1	+	5						
655	12.9	+15.6	-8.4	0	+	6	706	13.0	+20.3	+22.6	-	8
							707*	13.3	+20.3	-23.6	0	-
656	14.1	+15.7	+11.3	-6	0		708	13.5	+20.3	-18.1	-	11
657	13.0	+15.7	-14.4	+3	+	1	709	14.8	+20.4	-3.6	-	7
658	14.2	+16.0	+7.8	+1	+	7	710	14.3	+20.5	-7.6	-	2
659	12.9	+16.2	+13.4	-5	-	18						
660	13.1	+16.5	+4.6	-6	-	2	711	12.7	+20.5	+29.6	-	3
							712	12.5	+20.6	-26.2	+	20
661	13.1	+16.9	+12.2	-6	+	2	713	14.1	+20.6	-30.9	+	3
662	12.5	+17.1	+22.9	-9	0		714	12.9	+20.7	+20.7	-	3
663*	13.5	+17.4	-13.6	+6	+	6	715	12.5	+21.0	+5.6	+	3
664	14.2	+17.5	+23.4	+4	-	5						
665	14.0	+17.5	-33.2	-5	+	2	716	13.8	+21.1	+11.8	-	29
							717	13.0	+21.1	-16.6	-	4
666	13.6	+17.6	+29.9	+3	-	8						
667	13.2	+17.6	-17.4	+1	-	1	718	12.2	+21.2	-26.2	-	14
668	12.5	+17.7	-16.6	+1	-	4	719	12.9	+21.3	-22.4	-	5
669	13.7	+17.7	+21.2	-3	-	1	720*	12.9	+21.3	+18.1	-	2
670	13.1	+17.8	+11.8	-2	+	5						
							721	13.2	+21.3	+17.7	-	i
671	14.5	+17.9	-17.6	-4	+	2	722	14.7	+21.3	-5.9	+	11
672	13.8	+17.9	-2.1	-4	-	4	723	13.3	+21.4	+7.8	+	8
673	12.9	+18.2	-30.4	-7	-	6	724	14.1	+21.5	+28.2	+	5
674	11.9	+18.3	+13.1	-2	-	19	725	14.0	+21.5	+25.5	-	4
675*	13.1	+18.3	-4.4	-5	-	2						
676	12.6	+18.3	-17.6	+9	-	10	726	12.4	+21.5	-31.0	-	3
677	12.5	+18.4	-2.4	-4	+	18	727	13.8	+21.7	+9.5	-	2
							728	14.4	+21.8	+4.6	-	2
							729	12.7	+22.2	-34.6	-	4
							730*	13.4	+22.2	+27.9	-	3

Continuation of the CATALOGUE

No. of the star	m_{pg}	x	y	μ_x	μ_y	No. of the star	m_{pg}	x	y	μ_x	μ_y
731	13.1	+22.3	-21.4	+ 1	+ 17	783	9.2	+28.2	-10.8	-21	- 27
732*	13.4	+22.4	+18.7	+ 2	- 2	784	14.1	+28.3	+20.8	- 5	+ 4
733	13.4	+22.5	+ 5.7	- 4	+ 4	785	14.3	+28.3	-25.0	+ 5	+ 5
734	13.9	+22.6	+ 5.8	+ 3	+ 1	786	13.4	+28.3	+26.7	+ 3	+ 11
735*	13.4	+22.6	- 9.0	+ 4	- 2	787	12.6	+29.2	+10.4	- 3	- 11
736	13.5	+22.6	+26.4	+ 4	0	788	14.5	+29.2	-26.2	+ 7	0
737	14.5	+22.7	-10.5	- 3	+ 1	789	13.0	+29.3	+ 0.6	- 2	- 1
738	14.5	+22.7	+ 3.2	0	- 3	790	14.3	+29.3	-16.3	+ 4	+ 3
739	13.7	+22.9	-26.1	- 3	- 3	791	12.9	+29.4	+16.9	- 1	+ 5
740	12.8	+23.1	+ 1.3	- 8	+ 5	792	13.0	+29.6	+14.4	- 1	- 20
741	12.6	+23.1	+ 7.1	+ 5	+ 6	793	14.1	+29.6	-19.3	+ 2	+ 1
742	14.1	+23.3	-29.5	+ 2	0	794	12.9	+29.7	-16.2	- 6	- 10
743	13.9	+23.5	+ 9.8	-10	-12	795	14.3	+29.7	+18.1	+ 8	- 6
744	13.8	+23.6	+ 9.2	+ 5	- 8	796	13.6	+29.9	-24.9	- 2	- 3
745	12.9	+23.6	+15.2	+ 2	+ 8	797	12.9	+30.0	-15.8	- 6	+ 4
746	12.3	+23.7	+30.0	+ 2	- 2	798*	13.8	+30.3	-19.9	+ 6	- 4
747	12.3	+23.8	- 6.6	- 3	+ 6	799	13.3	+30.6	-28.0	- 6	- 5
748	12.9	+23.9	+31.6	- 3	+ 4	800	12.0	+30.7	-27.0	-11	- 4
749	13.3	+24.0	-32.6	+ 7	+ 4	801	12.6	+30.7	-- 5.6	- 4	- 7
750	14.3	+24.1	+25.7	- 4	- 1	802	14.0	+30.9	+23.1	+ 2	+ 3
751	14.1	+24.2	+24.4	+ 1	- 3	803	11.4	+31.0	+19.8	- 9	+ 1
752	13.0	+24.3	-33.4	- 7	+ 1	804	14.2	+31.1	-25.6	+10	0
753	14.5	+24.2	- 0.1	- 2	+ 8	805	12.3	+31.1	- 3.9	-19	- 14
754	13.0	+24.5	-24.1	+ 3	- 7	806	14.1	+31.3	+11.7	- 5	+ 5
755	14.9	+24.6	-26.8	+ 8	- 4	807	10.8	+31.4	-14.2	- 1	0
756	13.8	+24.6	-29.3	+ 2	0	808	14.5	+31.5	+ 1.2	- 1	+ 6
757	12.5	+24.7	-18.3	-11	+ 4	809	13.8	+31.6	+ 7.4	0	- 1
758	10.3	+25.2	-17.8	-11	- 6	810	11.9	+31.7	+ 9.6	-16	- 8
759	13.1	+25.5	+10.8	-14	- 3	811	14.0	+31.7	- 3.3	+ 7	- 3
760	12.8	+25.3	-33.6	+ 2	- 6	812	14.3	+32.1	-13.2	0	- 2
761	12.0	+25.6	+30.4	- 5	- 9	813	14.2	+32.2	-15.6	- 8	+ 6
762	13.2	+25.9	+ 5.7	-11	0	814	13.0	+32.3	-17.6	+ 3	- 7
763	13.4	+26.0	- 2.3	- 3	+ 2	815*	13.6	+32.3	- 6.6	- 3	+ 1
764	12.8	+26.2	-15.2	-14	-25	816	14.5	+32.3	- 4.8	0	+ 4
765	12.5	+26.3	+29.4	- 4	+ 7	817	11.9	+32.3	+ 4.8	-14	- 16
766	13.1	+26.3	-25.6	- 4	+ 2	818	13.8	+32.5	+16.3	- 6	- 6
767	14.5	+26.3	- 8.6	- 6	+ 5	819	12.9	+32.6	+19.9	- 1	+ 4
768	14.3	+26.5	-31.6	+ 9	+ 8	820	9.1	+32.7	-10.9	- 1	- 7
769*	13.0	+26.5	-31.4	- 1	0	821	13.2	+32.8	+21.4	- 7	+ 5
770	14.1	+26.6	+14.6	+ 2	+ 5	822*	13.2	+33.3	+15.2	- 1	- 5
771	13.8	+26.6	- 7.4	+ 3	- 2	823	13.8	+33.4	- 7.6	-13	+ 4
772	12.9	+26.8	+29.2	0	- 2	824	13.9	+34.0	-15.8	+ 5	+ 3
773	14.3	+26.9	-24.7	- 3	- 2	825	14.5	+34.1	-20.9	+12	- 6
774	11.7	+26.9	+ 6.7	- 3	-23	826	14.6	+34.3	- 4.7	- 4	+ 7
775	13.1	+26.9	-16.3	- 2	- 3	827	13.8	+34.3	+18.5	+ 5	+ 1
776	13.9	+27.3	+ 5.3	-12	- 2	828	12.4	+34.6	+ 9.9	-10	- 7
777	14.1	+27.3	- 2.7	- 3	+ 5	829	13.1	+34.6	- 4.6	+ 2	- 1
778	14.5	+27.6	-25.6	+ 6	- 2	830	13.5	+34.7	+10.8	- 5	- 11
779	14.1	+27.9	-19.6	+ 5	0	831	13.8	+34.9	+18.2	- 3	+ 4
780*	12.4	+28.0	+ 7.4	- 6	- 1	832	12.7	+35.0	- 8.3	- 4	+ 4
781	11.9	+28.1	-20.1	- 5	- 8	833	14.2	+35.1	- 4.3	-10	- 1
782	14.3	+28.2	+16.4	+ 1	+ 4	834	12.3	+35.4	+ 7.6	-18	- 7
						835*	13.0	+35.5	- 1.2	- 3	+ 7

Continuation of the CATALOGUE

No. of the star	m_{pg}	x	y	μ_x	μ_y	No. of the star	m_{pg}	x	y	μ_x	μ_y
836	14.2	+35.5	-13.2	+ 5	+ 4	841	13.5	+37.0	+ 4.0	- 8	+ 2
837	12.8	+35.7	-18.3	- 9	- 7	842	11.2	+37.0	+ 8.8	- 4	+ 22
838	13.1	+35.8	-12.4	+ 4	- 2	843	12.3	+38.5	+ 0.9	- 2	- 9
839	12.2	+36.1	- 3.6	0	+ 2	844	13.8	+38.7	- 3.9	+16	+ 4
840	13.6	+36.5	-18.8	-12	- 5						

Stars with large proper motions

1	13.9	-36.5	+ 8.4	+ 9	- 54	13	13.8	+ 3.0	-21.4	-11	- 54
2	11.9	-33.4	- 1.3	+10	- 41	14	8.6	+ 5.5	-18.2	- 7	- 47
3	12.7	-33.2	- 3.8	+10	- 59	15	12.2	+ 6.8	+21.9	-12	- 41
4	12.3	-32.9	-31.2	+88	- 37	16	12.2	+ 7.1	+28.0	-90	-153
5	6.8	-16.3	+19.4	-37	- 25	17	13.3	+ 9.7	-24.2	+43	- 56
6	11.1	- 3.6	- 2.3	+25	- 52	18	12.3	+15.1	- 7.4	+49	- 88
7	13.6	- 2.0	+37.2	-35	- 27	19	12.6	+18.8	- 7.6	+91	- 31
8	13.0	- 1.2	-34.6	+11	-115	20	14.2	+21.8	-31.5	+26	- 27
9	12.7	- 0.5	-23.2	+26	- 25	21	11.4	+25.4	+11.4	-15	- 35
10	12.2	- 0.4	+24.4	+28	- 28	22	10.2	+30.4	+ 8.7	-15	- 39
11	12.0	+ 0.3	+23.7	- 2	- 51	23	10.6	+39.7	-31.3	+48	-504
12	11.6	+ 1.6	-29.9	+80	- 97						

Region X Leo

 $\alpha_{1950} = 09^h 48^m 4$ $\delta = +12^\circ 07'$

1	13.8	-51.3	- 9.3	0	+ 10	31*	13.4	-20.8	- 5.4	+14	+ 3
2	13.9	-51.2	- 8.0	+ 9	+ 21	32	11.8	-20.1	-28.9	+ 1	- 4
3	12.1	-45.4	+15.5	- 9	+ 14	33	13.5	-19.8	+11.0	+ 5	- 20
4*	12.7	-44.6	- 9.2	-12	+ 12	34	14.0	-19.6	-13.6	- 3	+ 8
5*	12.7	-43.8	+ 9.3	- 6	+ 5	35	14.0	-18.8	-14.5	-14	+ 11
6	13.0	-43.0	- 9.1	+ 6	+ 16	36*	13.0	-18.0	-21.1	- 3	+ 16
7	12.5	-42.0	-12.6	- 3	+ 13	37*	12.9	-17.1	+29.2	+ 4	+ 10
8	11.0	-41.8	- 6.9	-14	- 16	38	13.4	-16.7	-28.0	-15	+ 12
9	11.5	-40.0	+ 5.8	+ 6	+ 13	39	12.4	-16.2	+35.6	+29	- 10
10	13.8	-36.5	-31.6	-20	+ 11	40	13.0	-16.1	-32.5	+12	- 6
11	13.6	-36.2	- 9.2	- 1	+ 13	41*	12.7	-14.4	+17.4	+ 9	- 6
12	13.8	-35.4	- 0.7	+25	+ 18	42	12.2	-13.4	-38.0	-32	- 15
13	13.5	-34.4	-22.2	- 9	+ 11	43	14.0	-13.0	+18.5	-18	+ 6
14	12.4	-34.0	-27.0	- 6	+ 31	44	13.4	-12.4	-28.6	-19	+ 9
15*	12.7	-32.0	-32.0	+ 5	+ 3	45*	12.7	-12.3	+33.5	-17	- 15
16*	12.7	-31.3	-17.2	-10	+ 3	46	13.9	-12.3	+37.6	- 5	+ 3
17	13.9	-30.7	+24.0	-12	+ 17	47	13.8	-11.8	- 3.8	- 2	+ 8
18	14.0	-29.8	- 8.8	+ 6	+ 5	48	12.9	-11.5	-12.2	-23	- 12
19	14.0	-29.1	-32.1	-16	- 23	49*	12.9	-10.6	-21.6	+ 5	+ 24
20	13.4	-28.0	+ 6.9	- 3	+ 16	50	13.2	-10.1	+28.2	- 6	+ 17
21*	12.7	-27.0	+12.5	+ 7	+ 12	51	13.6	-10.0	+ 9.6	-27	+ 8
22	13.8	-25.3	+ 3.2	0	- 5	52	13.4	- 9.9	-43.6	-31	+ 3
23*	12.1	-24.7	+35.1	+ 8	+ 2	53	13.6	- 9.6	+13.0	-29	+ 12
24	13.8	-24.5	+38.2	- 6	+ 15	54	14.0	- 9.1	+ 8.4	+31	- 1
25	14.0	-24.2	- 5.0	+ 5	+ 13	55	13.8	- 8.0	+ 4.5	-12	+ 11
26	11.8	-24.0	+30.5	+17	- 1	56	14.0	- 7.4	-11.4	-19	+ 23
27	14.0	-23.3	- 44.	0	+ 15	57	14.0	- 6.2	-27.2	- 3	+ 5
28	13.2	-22.2	+30.8	+ 4	+ 13	58*	12.9	- 5.9	-33.2	+ 1	+ 5
29	14.0	-21.4	+30.9	-33	+ 7	59	13.8	- 5.2	-18.0	-16	+ 14
30	10.0	-21.2	+13.3	-29	- 9	60	12.7	- 5.2	+44.4	- 9	- 5

Continuation of the CATALOGUE

40

No. of the star	m_{pg}	x	y	μ_x	μ_y	No. of the star	m_{pg}	x	y	μ_x	μ_y
61*	12.4	- 4.8	-10.8	+15	- 25	79*	13.4	+16.4	-22.8	- 3	+ 6
62	12.1	- 3.0	-38.4	-20	- 15	80	13.8	+17.0	+17.6	-10	- 9
63	13.8	- 1.6	-30.9	+12	- 13						
64	13.9	- 1.6	+16.3	-25	+ 1	81	13.6	+17.4	+29.1	+19	+ 4
65	13.4	- 0.2	-10.0	-16	- 3	82*	12.3	+18.1	+11.8	-20	+ 15
						83	12.2	+20.8	+13.2	- 2	+ 25
66*	12.7	+ 0.2	+19.5	- 2	- 29	84*	12.7	+22.2	- 5.1	-10	- 5
67*	12.4	+ 1.2	-37.2	- 5	+ 10	85	12.4	+23.0	-35.8	- 7	- 8
68*	12.1	+ 3.7	- 9.0	+12	- 1	86	13.5	+23.0	+10.9	+ 4	+ 2
69*	13.2	+ 6.5	+32.3	0	+ 1	87*	11.8	+23.4	+30.1	+ 2	- 2
70*	13.6	+ 8.0	-18.9	-10	- 2	88*	13.4	+27.2	-26.0	- 7	+ 1
						89	13.5	+29.7	-24.9	-11	+ 3
71*	13.2	+ 8.8	+32.9	- 1	+ 20	90*	11.8	+31.0	+17.1	- 1	- 1
72	12.9	+ 9.0	+36.7	-29	- 7						
73*	12.7	+10.0	+11.4	+23	- 8	91	14.0	+31.2	+ 7.3	-10	0
74*	13.5	+10.2	+ 1.7	+ 6	- 7	92	13.4	+32.3	+22.2	- 6	- 2
75	13.8	+12.8	- 1.6	-19	- 6	93	14.0	+32.6	+ 7.9	- 9	+ 22
						94	13.6	+33.0	- 9.4	-31	+ 1
76	13.5	+14.9	-20.2	-18	- 1	95	13.4	+35.3	- 8.2	-34	+ 3
77*	12.7	+15.4	-37.0	+ 5	+ 2						
78	13.9	+16.3	-10.0	+ 6	- 4	96	10.2	+38.3	-13.2	+16	+ 1

Reference stars around the variable X Leonis

1	12.1	-67.2	-34.4	- 3	- 12	8	13.5	-44.1	-34.2	+ 2	- 1
2	13.4	-60.0	-19.5	-11	+ 5	9	12.7	-43.7	-33.5	+14	- 14
3	13.8	-58.0	-27.2	- 8	+ 21	10	12.9	-42.6	-39.0	- 9	+ 10
4	12.1	-57.2	-19.4	-14	+ 20						
5	12.7	-56.8	-30.6	+ 3	+ 18	11	11.0	-39.8	-35.2	+34	- 5
						12	12.9	-38.0	-34.6	-17	+ 12
6	10.2	-56.0	-27.6	-12	- 8	13	13.2	-36.3	-31.9	-11	+ 12
7	13.6	-46.2	-32.8	+ 6	+ 5	RZeo	11.5	-51.6	-27.5	+16	- 35

Stars with large proper motions

1	13.2	-61.1	-21.0	-80	- 52	14	12.9	- 9.5	+33.8	0	+ 45
2	9.0	-55.0	-30.4	-64	+ 30	15*	13.4	- 3.0	- 2.3	+14	- 40
3	10.2	-54.9	-30.8	-68	+ 24						
4	13.8	-39.0	0	+13	- 47	16	13.8	+ 5.0	+20.2	-35	- 6
5	14.0	-34.0	-31.2	+37	- 72	17	13.2	+ 7.0	+27.3	+37	+ 11
						18	13.2	+ 7.2	+16.8	-33	+ 24
6	9.0	-30.0	+13.3	-120	+ 40	19	11.5	+12.6	+38.2	-35	+ 36
7	14.1	-26.2	+25.0	-30	- 87	20	12.9	+14.9	+30.8	+57	- 37
8	11.8	-18.8	+35.8	-60	+ 22						
9	9.0	-18.0	-16.9	-319	- 53	21	12.1	+15.8	-28.2	-78	+ 14
10	11.8	-16.5	-22.2	-46	- 27	22	11.0	+16.8	+20.7	-61	+ 41
						23	11.8	+23.2	-35.0	-17	- 47
11	13.2	-13.6	+33.2	-22	+ 30	24	12.3	+28.4	+26.1	+21	- 29
12	12.9	-13.2	+ 1.8	-27	+ 33	25	10.0	+35.4	-13.8	+79	- 89
13*	11.8	-12.3	+13.6	-20	- 33	26	14.0	+48.0	+ 4.0	-93	- 35

Region TW Vir

		$\alpha_{1950} = 11^h 42^m 1$	$\delta_{1950} = -04^\circ 05'$		
1*	12.9	-31.1	-10.4	- 4	- 10
2	13.4	-29.4	- 9.0	+ 9	+ 1
3	12.6	-28.3	+ 5.2	- 7	+ 4
4	12.9	-28.3	0	- 2	- 6
5*	13.4	-28.3	+ 6.1	+15	+ 9
11*	14.8	-24.5	+ 1.1	+ 3	- 3
12*	13.9	-23.6	+10.7	-16	+ 8
6*	13.7	-28.0	+20.0	+ 2	-11
7	13.1	-27.7	- 8.0	0	- 2
14	13.3	-22.2	+21.6	+ 3	+ 10

Continuation of the CATALOGUE

No. of the star	m_{pg}	x	y	μ_x	μ_y	No. of the star	m_{pg}	x	y	μ_x	μ_y
15	13.3	-21.0	+ 6.9	- 6	+ 15	61	14.6	+ 2.9	+ 7.5	-18	0
16*	14.5	-20.2	+28.3	+ 4	+ 2	62	15.0	+ 3.0	+ 0.6	-10	- 15
17	10.5	-18.9	- 5.0	-13	+ 19	63	13.5	+ 3.4	+13.9	+10	+ 7
18	10.9	-18.2	+ 0.3	+21	+ 21	64*	14.1	+ 3.6	+ 7.6	+ 5	- 4
19	12.9	-17.1	+21.8	+13	- 20	65*	13.6	+ 3.8	+22.7	-19	+ 26
20*	14.1	-16.2	+21.7	- 1	- 6	66	15.2	+ 4.3	+24.3	+11	- 11
						67	12.6	+ 5.4	+13.6	+10	- 19
21*	14.6	-15.5	- 2.2	- 4	+ 2	68	11.5	+ 5.7	+35.6	- 7	+ 10
22	13.1	-15.1	+16.6	+20	- 3	69	13.4	+ 6.0	+ 9.0	-25	+ 1
23*	14.6	-14.8	-25.3	-10	- 11	70	14.0	+ 6.1	+23.5	- 8	+ 11
24	13.1	-14.2	-32.3	- 1	+ 8						
25*	13.1	-13.5	-33.6	+17	+ 6	71	12.4	+ 7.8	+33.5	- 8	+ 1
						72	11.9	+ 9.1	-26.8	- 5	- 4
26*	14.2	-13.3	+12.0	- 2	- 5	73	15.2	+ 9.9	+25.6	-17	- 16
27	14.1	-12.3	- 4.0	-20	- 19	74*	13.8	+10.8	-30.6	+13	- 4
28	12.4	-12.0	- 6.0	- 2	+ 4	75*	14.1	+10.8	- 0.8	+ 3	+ 3
29*	13.8	-11.2	+ 7.0	+16	+ 1						
30	13.5	-11.0	+15.6	+14	- 20	76*	14.0	+10.9	+12.7	+10	+ 8
						77	13.0	+11.2	-23.6	-21	+ 7
31	12.9	-10.3	-20.9	- 8	+ 6	78*	14.2	+11.9	-12.4	-11	- 6
32	15.1	- 9.4	+ 1.1	-20	+ 18	79	12.4	+12.1	-28.6	-14	- 3
33	13.9	- 9.0	+15.3	+ 6	- 2	80	13.4	+13.1	+ 0.1	-23	+ 11
34*	13.4	- 8.2	-20.3	-12	+ 13						
35	12.3	- 7.7	-33.2	-13	- 8	81	12.4	+13.4	+ 3.1	+10	- 14
						82*	14.6	+15.4	+27.0	- 1	- 2
36	13.4	- 7.4	+20.9	+12	- 19	83*	13.9	+15.8	+ 7.7	+ 5	- 20
37	14.2	- 7.2	-21.0	-34	+ 9	84	13.0	+15.9	- 2.6	+11	- 14
38	14.0	- 7.1	+11.5	- 6	+ 11	85	15.2	+18.2	+19.6	- 3	+ 22
39*	14.9	- 6.4	-10.4	+ 2	+ 3						
40	12.4	- 4.8	+37.6	+ 2	+ 10	86	15.1	+18.8	+21.6	- 1	+ 21
						87	14.6	+18.9	-25.2	-11	+ 5
41	13.4	- 4.4	-31.6	-24	- 5	88	14.8	+19.1	+21.2	+19	+ 3
42	13.3	- 4.1	-25.4	-12	- 21	89*	14.1	+19.2	-21.1	- 4	+ 3
43	12.6	- 3.6	+10.6	- 8	+ 9	90*	14.6	+19.4	+21.8	+16	+ 14
44*	14.6	- 3.2	+28.6	- 9	- 7						
45	12.4	- 3.1	+37.9	-14	+ 18	91	13.6	+19.6	+22.6	+ 7	+ 12
						92*	12.9	+20.2	+14.4	- 1	+ 2
46*	14.5	- 2.6	-29.2	+ 2	- 9	93	11.8	+20.9	+ 9.8	-26	+ 18
47*	14.8	- 2.2	-22.4	-22	+ 4	94	12.6	+22.2	+17.6	+ 3	- 12
48	13.2	- 0.9	+ 8.6	+ 5	- 11	95*	13.7	+25.0	- 1.8	+ 4	+ 2
49	14.4	- 0.2	+ 5.6	- 2	+ 19						
50	11.4	- 0.2	+20.9	-13	- 21	96	11.8	+26.7	+ 5.6	+19	- 23
						97	13.5	+27.5	- 3.0	+16	0
51	11.8	+ 0.1	+18.6	-18	+ 22	98	13.4	+28.5	- 3.7	+26	0
52	13.4	+ 0.1	+17.9	-20	+ 18	99	13.2	+28.6	+ 9.0	+12	- 3
53*	14.0	+ 0.3	+32.7	- 7	- 15						
54*	14.6	+ 0.6	-32.9	- 8	+ 7	100	13.5	+28.9	+10.3	-22	+ 1
55	15.0	+ 0.9	-28.4	- 3	+ 6	101	12.3	+29.4	+ 8.2	+12	+ 7
						102*	13.8	+29.8	+ 1.1	+ 5	- 4
56	15.0	+ 1.1	-28.5	-18	+ 15	103	11.5	+30.6	-17.4	- 2	+ 8
57	15.1	+ 1.2	+12.2	+ 4	- 4	104	9.6	+30.8	-11.3	-19	- 19
58	13.3	+ 1.7	-19.4	+ 1	+ 13	105	14.9	+34.9	-20.6	-23	+ 23
59	10.3	+ 2.0	- 5.0	+14	- 30	106	14.5	+36.0	- 1.4	-22	+ 4
60	13.7	+ 2.0	+38.6	- 8	+ 9	107	13.9	+38.4	-24.4	+23	- 21

Stars with large proper motions

1	13.8	-48.3	- 0.2	-62	+ 35	4	13.9	-35.2	+25.5	-36	- 6
2	10.8	-39.2	+24.2	-70	-33	5	13.5	-23.2	+ 3.2	-43	+ 2
3	12.6	-38.0	+21.2	-119	+ 44						

Continuation of the CATALOGUE

No. of the star	m_{PG}	X	Y	μ_x	μ_y	No. of the star	m_{PG}	X	Y	μ_x	μ_y
6	13.5	-19.0	-6.7	-74	-11	18	15.0	+ 3.7	-11.0	-35	+ 36
7	10.1	-18.2	+33.9	+14	-35	19	12.6	+12.8	+ 9.6	+24	- 54
8	12.9	-12.4	-4.0	+19	-102	20	11.8	+14.4	+ 7.9	-52	+ 51
9	11.4	-10.2	+24.5	-69	+ 25						
10	11.9	- 9.0	+13.6	+52	- 20	21	13.2	+17.6	+28.6	-45	+ 21
						22	12.8	+20.0	+46.1	- 8	- 62
11	10.5	- 4.9	-43.0	-43	- 2	23	12.9	+22.1	-21.5	-42	+ 4
12	14.5	- 4.8	- 5.3	-38	0	24	12.4	+22.7	+ 5.7	-18	- 43
13	14.5	- 3.2	-18.7	-44	+ 2	25	12.5	+23.1	- 8.7	-38	+ 12
14	14.9	- 2.1	+32.6	+75	- 2						
15	11.0	- 1.8	+ 6.9	+26	- 30	26	10.3	+29.9	+46.6	+24	- 27
						27	14.2	+32.0	+45.8	+ 1	+ 42
16	11.8	- 1.6	+ 1.7	-40	+ 26	28	13.7	+36.4	+15.2	-186	-133
17	7.9	0.0	0.0	-15	- 42						

Region UZ Ser

 $\alpha_{1950} = 18^h 09^m 2^s$ $\delta_{1950} = -14^\circ 56'$

1	13.0	-36.6	- 2.2	+ 17	+ 5	37	12.2	-30.6	-16.3	-11	- 3
2	13.0	-36.4	- 1.8	+12	+ 7	38*	13.9	-30.6	+16.1	- 2	+ 1
3*	14.0	-36.4	- 0.8	+13	- 6	39	14.0	-30.6	+11.1	+11	+ 7
4	12.4	-36.2	- 3.4	+ 1	+30	40	14.1	-30.5	+13.0	- 1	- 8
5	12.2	-35.3	+ 4.9	+14	+ 7						
6	14.5	-35.1	+ 1.7	+21	+ 8	41	14.8	-30.4	+ 1.5	+26	- 2
7	14.5	-35.0	+ 1.0	+ 6	+ 6	42	14.0	-30.2	+11.3	- 1	- 6
8*	13.9	-34.8	- 8.2	+14	- 2	43	12.5	-30.1	+ 8.0	+17	- 4
9	13.8	-34.2	- 4.3	+24	+19	44	13.2	-30.1	+ 6.9	+12	+ 4
10	13.1	-34.4	+12.6	+ 5	- 2	45	13.6	-30.1	+ 1.7	- 1	-11
						46	11.8	-30.1	+ 1.6	- 2	0
11	14.1	-33.9	+ 5.8	+ 6	+ 2	47	14.0	-29.9	- 8.0	+18	- 4
12	13.6	-33.8	+ 2.3	+14	- 8	48	12.3	-29.7	+ 3.8	+ 4	- 8
13	13.5	-33.5	- 5.9	-14	-28	49	13.9	-29.7	-20.8	-14	- 6
14	13.2	-33.3	+ 8.3	- 6	+ 2	50	13.8	-29.6	- 3.6	- 3	- 2
15	12.2	-33.1	+10.8	+ 5	+ 4						
16	9.5	-33.0	+ 3.5	-13	- 2	51	13.9	-29.5	- 7.2	+ 6	- 4
17	13.6	-33.0	+ 3.0	+ 3	-13	52	14.6	-29.4	- 1.1	-19	-19
18	14.0	-32.9	- 7.2	- 4	- 7	53	13.2	-29.4	- 2.1	+18	-10
19	14.5	-32.5	+ 6.1	- 9	- 8	54	14.9	-29.3	- 1.4	- 6	- 8
20*	13.9	-32.5	+ 6.0	- 6	- 9	55	10.9	-29.2	-19.3	- 4	+ 4
						56	14.0	-29.2	-19.8	- 3	+10
21	13.9	-32.2	-11.5	- 4	-32	57	13.5	-29.1	+16.2	- 4	-10
22	14.3	-32.1	- 2.8	- 8	+ 6	58	13.3	-28.9	+ 4.5	- 1	+ 6
23	12.7	-32.0	-11.0	0	- 2	59	14.1	-28.8	-11.0	+ 9	- 8
24	14.5	-32.0	-25.1	-16	+ 1	60	12.5	-28.8	-24.5	+ 1	+22
25	13.4	-31.9	-25.2	-12	- 2						
26	12.8	-31.9	-15.3	-16	- 2	61	14.4	-28.7	-24.6	+18	+ 26
27	13.5	-31.8	+ 2.8	- 4	- 7	62	12.5	-28.5	+16.2	- 4	+ 5
28	13.0	-31.8	- 0.7	- 8	- 1	63	14.5	-28.2	- 1.8	0	0
29	12.8	-31.6	+14.1	-10	-14	64	13.2	-28.0	+21.2	+ 8	+ 8
30	14.6	-31.6	+ 4.5	+ 5	0	65	13.3	-27.9	+15.0	+ 6	- 6
						66	14.6	-27.6	- 0.5	0	+ 2
31	13.9	-31.6	- 7.5	+ 3	+ 6	67	13.3	-27.2	-23.0	+ 6	+ 7
32	13.0	-31.1	-13.9	-12	- 4	68	13.5	-27.1	+13.6	- 2	+ 1
33	13.5	-31.1	+ 1.2	+ 6	+ 8	69	12.0	-27.0	+ 5.5	+ 2	+ 6
34	12.4	-30.9	-16.6	+ 5	+ 6	70	13.9	-26.9	-10.9	-12	0
35	13.6	-30.8	-11.7	+ 2	-10						
36	14.7	-30.8	+ 2.8	+ 2	- 5	71	14.6	-26.9	+ 5.8	- 2	+ 10
						72	14.5	-26.8	+ 7.6	- 7	- 3

Continuation of the CATALOGUE

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No. of the star	m_{PG}	x	y	μ_x	μ_y	No. of the star	m_{PG}	x	y	μ_x	μ_y			
73	10.7	-26.7	-22.8	-12	+	3	126	11.8	-21.8	-1.4	+	4		
74	14.0	-26.7	+16.8	0	-	6	127	14.9	-21.6	+16.3	-	7		
75	13.5	-26.5	+4.0	-8	+	14	128	13.0	-21.6	+11.2	-	2		
							129	14.5	-21.2	-12.2	+	14		
76*	13.4	-26.4	-17.2	-8	0		130	14.6	-21.2	-19.9	+	30		
77	13.4	-26.3	-17.6	-6	+	5								
78	13.0	-26.3	+17.6	+2	-	10	131	13.5	-21.2	-24.3	-	16		
79	13.3	-26.3	+11.4	+4	+	8	132	13.4	-21.2	-27.8	-	2		
80	13.1	-26.2	-0.7	0	+	2	133	14.0	-21.0	-17.9	-	6		
							134	12.7	-21.0	-27.2	-	4		
81	13.3	-26.0	-18.8	-2	-	8	135	14.5	-21.0	-2.8	-	3		
82	12.4	-26.0	+24.0	+10	-	2								
83	13.6	-26.0	-2.8	+6	+	16	136	13.9	-21.0	-6.6	-	12		
84	14.2	-25.9	-14.2	-18	-	3	137*	13.9	-21.0	-4.6	-	3		
85	12.0	-25.7	-10.6	-2	+	8	138*	13.6	-20.9	-19.8	+	12		
							139	14.9	-20.9	-1.6	+	7		
86*	13.6	-25.6	-24.0	+8	+	17	140	13.6	-20.8	-5.4	-	11		
87*	13.6	-25.6	+1.9	-2	+	5								
88	14.2	-25.5	+18.5	-2	+	2	141	13.5	-20.7	-17.2	-	8		
89	12.3	-25.4	-3.7	-12	-	3	142	11.4	-20.7	-7.8	+	10		
90	14.6	-25.3	-17.6	-11	-	6	143	13.6	-20.6	+26.2	+	8		
							144	14.6	-20.6	+9.4	+	2		
91	14.2	-25.3	-11.7	-30	-	4	145	12.8	-20.4	+6.3	-	6		
92*	14.0	-25.3	-11.8	-2	-	8								
93	14.3	-25.3	-20.9	-28	-	25	146*	13.6	-20.4	+6.0	+	4		
94	14.1	-25.2	-22.8	-6	-	8	147	14.0	-20.3	-0.8	-	2		
95*	13.8	-25.2	+20.3	-5	-	6	148	13.6	-20.2	+19.4	+	7		
							149	13.6	-20.2	+15.1	-	4		
96	13.5	-25.0	-20.2	+4	0		150	13.0	-20.1	-8.6	-	2		
97	12.6	-24.9	+7.0	+2	+	12								
98	14.4	-24.7	+9.4	-6	0		151	12.7	-19.9	-19.5	+	5		
99	13.2	-24.6	+24.2	+1	-	2	152	13.6	-19.9	-2.4	-	2		
100	12.7	-24.6	-11.0	-2	-	14	153	13.8	-19.9	-7.9	-	5		
							154	13.1	-19.8	+7.0	+	6		
101	13.9	-24.4	+20.2	-6	-	20	155	12.8	-19.5	-14.2	-	11		
102*	13.9	-24.3	+12.0	-4	+	1								
103	14.2	-24.0	-3.9	-8	+	2	156	13.0	-19.4	-27.6	+	6		
104	12.4	-24.0	-18.4	+1	-	14	157	13.6	-19.0	-14.4	-	8		
105	12.7	-23.9	+22.6	+28	-	11	158	14.0	-18.7	-17.4	+	8		
							159	13.5	-18.5	-15.5	0	+	8	
106	14.6	-23.8	-9.2	+4	-	8	160	13.5	-18.3	-12.0	-	2		
107	13.2	-23.8	+18.4	0	-	6								
108	13.7	-23.5	-6.5	-18	-	4	161	13.2	-18.2	-7.8	0	+	10	
109	14.6	-23.4	-8.8	0	+	1	162	14.8	-17.7	-0.8	+	1	+	6
110	13.8	-23.2	-1.8	-27	+	2	163	13.4	-17.6	+1.0	-	6	+	10
							164	13.1	-17.2	-17.1	+	5	+	12
111	14.7	-23.1	-9.7	+2	+	2	165	13.4	-17.1	-18.8	-	7	+	9
112	12.8	-22.9	-7.9	-2	0									
113	14.7	-22.9	-18.4	-6	-	4	166	12.8	-17.1	-29.8	-	12	-	2
114	15.0	-22.9	-4.0	-6	-	4	167	15.0	-16.9	+12.8	-	21	-	4
115	13.1	-22.7	+26.4	+10	+	10	168*	14.0	-16.8	-27.7	-	6	-	1
							169	14.4	-16.7	+8.9	+	6	-	26
116	13.6	-22.7	-20.8	-4	+	6	170	13.9	-16.7	-1.3	+	9	-	4
117	13.3	-22.6	-10.9	+4	+	10								
118	13.2	-22.6	+2.8	+2	+	7								
119	13.2	-22.5	-27.4	-3	-	4	171	13.3	-16.7	+26.6	+	6	-	20
120	14.8	-22.4	+7.2	-13	-	11	172	15.0	-16.7	+22.7	-	4	-	4
							173	13.6	-16.6	+2.2	-	4	-	2
121	12.7	-22.2	-4.1	-2	+	1	174	13.0	-16.6	-19.8	+	2	+	10
122	13.9	-22.1	+25.6	+9	+	10	175	15.0	-16.6	+12.8	-	23	-	8
123	11.2	-22.0	-2.3	-8	+	16								
124	14.0	-21.8	+3.3	+10	+	6	176	14.0	-16.5	+12.0	-	15	0	
125	14.7	-21.8	-3.8	+6	-	12	177	13.5	-16.3	-13.9	+	10	-	15

Continuation of the CATALOGUE

No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
178	14.5	-16.2	+11.0	-16	-11	231	14.4	-12.2	-12.1	0	-16
179	13.3	-16.1	+29.2	+2	-4	232	13.6	-12.0	-24.6	-8	-11
180	13.4	-16.0	+2.2	-6	+2	233	13.7	-11.8	+4.3	0	+2
						234	13.3	-11.8	-0.1	-10	-14
181	13.6	-16.0	-4.8	+2	+2	235	14.0	-11.8	+25.3	-8	+6
182	13.3	-16.0	-4.6	+6	+4						
183	13.3	-16.0	-19.7	-17	+5	236	13.4	-11.7	+27.8	+3	-3
184*	14.0	-16.0	+19.4	+1	+2	237	14.8	-11.6	+11.6	+6	+4
185	13.4	-15.8	-11.5	-9	0	238	15.0	-11.6	-15.4	+7	-18
						239	15.0	-11.6	-15.5	-7	+5
186	14.4	-15.6	+8.1	-8	-10	240	14.1	-11.6	+31.3	-2	-4
187	13.8	-15.2	-11.5	+4	+7						
188*	14.0	-15.2	-21.2	-6	+2	241	14.6	-11.4	+5.5	+12	+22
189	14.8	-15.1	-18.0	+4	+6	242	13.9	-11.4	-21.3	-18	-6
190	12.8	-15.0	+32.2	-2	-4	243	13.1	-11.4	-21.5	+9	-15
						244	14.4	-11.2	-31.7	-8	-13
191	12.4	-14.8	-20.8	-7	-12	245*	13.5	-11.2	+6.2	-4	-7
192	13.5	-14.8	-29.8	+3	0						
193*	13.6	-14.7	+27.3	+3	-2	246	14.6	-11.2	-12.2	-6	-9
194	10.2	-14.7	+12.6	-24	-16	247	13.5	-11.0	-30.2	-11	-10
195	15.0	-14.6	-20.8	+4	+11	248	12.2	-11.0	-13.2	-2	+4
						249	13.1	-11.0	-15.6	+4	+1
196	13.5	-14.6	+5.6	+12	+6	250	13.1	-10.9	+32.4	+11	-12
197*	13.6	-14.5	-32.8	-10	+1						
198	13.5	-14.4	+32.2	+10	-2	251	15.0	-10.7	-20.4	-5	+6
199	14.3	-14.1	-17.3	-4	-2	252	14.7	-10.7	+12.5	-3	-8
200	14.7	-14.0	-17.9	-1	-6	253	10.0	-10.6	+31.2	+2	+6
						254	14.6	-10.5	+10.5	+6	-4
201	13.6	-14.0	+2.2	-12	+2	255	14.6	-10.2	+3.2	+1	-2
202	14.0	-14.0	-9.0	-6	-10						
203	14.9	-13.9	+18.5	+10	-5	256	12.2	-10.2	+15.8	+1	+2
204	14.8	-13.9	+0.4	0	-6	257	13.1	-10.2	+13.7	0	-4
205	13.1	-13.8	-3.0	+2	-8	258	13.5	-10.0	-18.6	+4	+10
						259	13.4	-10.0	33.2	+6	-5
206	14.6	-13.8	-6.3	-6	+9	260	13.6	-9.9	-10.7	-6	-4
207	13.1	-13.6	+33.4	-2	+7						
208	13.0	-13.6	+15.1	-4	-8	261*	13.8	-9.9	+0.8	+11	+3
209	14.6	-13.5	-12.8	-8	+7	262	13.2	-9.8	-17.8	+6	+1
210	14.8	-13.5	+1.5	-14	+4	263	14.2	-9.8	+29.8	-16	-24
						264	14.3	-9.8	+27.6	-4	+2
211	15.0	-13.4	+11.6	0	-1	265	12.2	-9.6	+34.1	+7	0
212	14.1	-13.3	-9.4	0	+2						
213	13.3	-13.2	-21.1	-3	-6	266	14.8	-9.6	+0.6	-2	0
214	14.8	-13.2	+13.7	+2	+28	267	13.5	-9.5	-26.7	+12	-6
215	14.6	-13.2	+13.8	+4	+24	268	14.6	-9.5	+16.4	+12	0
						269	13.0	-9.2	-18.6	+14	-5
216	15.0	-13.2	0	-18	-3	270	14.8	-9.2	-0.7	-2	0
217	14.2	-13.1	-32.7	-2	-18						
218	14.1	-13.1	+19.6	-8	-1	271	14.6	-9.1	+33.0	+10	-15
219	13.5	-13.1	-9.6	+1	0	272	14.6	-9.1	+2.2	+3	-7
220	13.0	-13.0	+32.6	-2	-14	273	14.5	-9.0	+26.4	-12	-3
						274	13.2	-8.9	-20.6	-28	-18
221	14.8	-13.0	-0.1	-22	-3	275*	13.7	-8.9	-24.0	+2	+2
222	15.0	-13.0	-8.8	+3	0						
223	13.4	-12.9	-20.2	+5	-4	276	13.6	-8.9	+25.3	-10	-7
224*	14.1	-12.9	+12.2	-4	-2	277	14.9	-8.4	+33.4	+12	-3
225	13.6	-12.8	+3.4	-8	0	278	14.8	-8.3	-0.9	+4	+3
						279	12.2	-7.9	-6.9	-4	+7
226	13.4	-12.7	-11.3	+2	+2	280	14.0	-7.8	+34.2	+2	-8
227	12.8	-12.4	+1.2	-10	+4						
228	12.0	-12.3	+15.2	+4	+3	281	14.6	-7.8	-8.3	+20	+6
229	14.9	-12.2	-19.5	-4	-10	282	14.7	-7.7	+27.6	+17	-2
230	15.1	-12.2	+15.3	+6	+6	283	13.3	-7.6	-1.1	0	+8

Continuation of the CATALOGUE

No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
284	14.4	- 7.3	+18.4	+ 3	- 7	336	13.9	- 2.9	-13.4	-14	+ 2
285*	13.5	- 7.2	-29.3	+ 2	+ 2	337*	13.8	- 2.0	+ 3.2	+ 1	- 6
286	13.8	- 7.1	-25.8	- 6	- 4	338	13.1	- 2.8	-15.4	- 2	0
287	12.2	- 7.0	-31.4	+10	- 7	339	12.0	- 2.8	-28.1	+ 4	+ 6
288*	13.3	- 7.0	- 7.9	- 2	+ 1	340	14.6	- 2.7	- 7.7	+ 6	- 8
289	13.0	- 6.9	+21.5	- 4	+ 8	341	14.7	- 2.7	- 6.5	- 7	- 6
290	12.8	- 6.8	+26.8	- 6	+ 6	342	14.5	- 2.6	-12.9	+ 4	- 4
291	14.0	- 6.8	+ 4.1	+13	- 12	344	12.5	- 2.4	-16.4	+ 6	- 2
292	13.5	- 6.5	-13.1	- 2	- 5	345	13.8	- 2.4	- 3.4	0	- 6
293	13.1	- 6.3	+24.3	+ 2	+ 4	346	15.0	- 2.2	+23.2	+ 8	- 1
294	14.6	- 6.2	-21.5	+ 6	+ 8	347	14.7	- 2.2	+19.8	- 8	+ 8
295	13.4	- 6.2	+27.4	+ 5	0	348	15.1	- 2.1	- 7.4	- 4	- 6
296	12.0	- 6.2	+23.1	+10	+ 9	349	15.0	- 1.9	- 6.9	- 8	+ 6
297	13.1	- 6.2	-11.6	- 3	+ 3	350	13.0	- 1.8	-34.0	+ 4	- 1
298	14.6	- 6.0	+26.2	- 2	+ 13	351	10.8	- 1.8	- 9.4	+ 1	+ 5
299	10.5	- 6.0	-29.6	- 7	+ 3	352	14.8	- 1.7	-25.4	+13	- 3
300*	14.0	- 6.0	+20.2	- 3	+ 5	353	14.6	- 1.7	+28.4	- 4	0
301	12.7	- 5.9	-15.7	+ 8	- 14	354	12.0	- 1.7	+ 7.6	+ 4	+ 4
302	14.2	- 5.8	- 8.7	- 4	- 4	355	14.0	- 1.7	- 9.6	+ 7	+ 5
303	14.9	- 5.8	-13.8	+ 8	- 5	356	12.8	- 1.6	-33.2	+ 2	- 15
304	14.9	- 5.8	-17.7	+ 3	- 5	357	13.9	- 1.5	+24.8	+ 5	+ 5
305*	13.9	- 5.7	+28.6	+ 1	+ 4	358	14.0	- 1.5	-11.9	0	- 8
306	13.8	- 5.6	-25.4	-10	+ 1	359	14.7	- 1.4	- 7.1	+ 6	+ 3
307	12.8	- 5.4	+ 3.5	-19	+ 9	360	14.9	- 1.4	- 5.5	- 2	+ 22
308	13.4	- 5.2	+15.6	+ 4	+ 12	361	13.8	- 1.2	-32.0	-10	0
309	14.4	- 5.2	-16.9	- 4	+ 3	362	13.9	- 1.2	-12.6	-12	+ 4
310*	13.8	- 5.1	-16.6	- 7	- 6	363	14.9	- 1.1	- 6.8	-11	+ 4
311	14.0	- 5.0	-15.4	- 8	- 3	364	13.0	- 1.0	- 6.5	- 6	+ 12
312	15.0	- 4.8	+ 3.4	- 8	+ 2	365	14.4	- 1.0	- 3.0	- 8	- 5
313	13.8	- 4.8	+22.6	- 6	- 2	366	13.6	- 1.0	-13.8	- 6	+ 2
314	13.5	- 4.6	-20.6	+ 4	+ 4	367	14.6	- 0.9	-33.8	+18	- 23
315	13.0	- 4.6	-23.5	- 4	- 8	368	14.8	- 0.8	+14.2	- 2	0
316	13.3	- 4.6	+ 5.1	- 5	- 4	369	12.8	- 0.8	+ 9.6	- 6	+ 12
317	14.0	- 4.4	+26.8	- 2	+ 4	370	14.2	- 0.8	- 3.0	+ 8	+ 8
318	14.9	- 4.3	-14.8	- 7	+ 5	371	14.6	- 0.8	-11.7	-11	- 5
319	13.5	- 4.3	+26.9	0	- 2	372	13.9	- 0.7	+26.2	+14	0
320	11.9	- 4.2	+30.1	+ 8	- 4	373	14.0	- 0.4	+26.3	0	- 12
321	14.4	- 4.2	+19.3	+10	- 16	374	13.8	- 0.4	- 9.5	- 1	+ 6
322	13.4	- 4.1	-34.3	+ 7	- 10	375	15.0	- 0.3	- 9.9	-18	- 8
323	12.2	- 4.1	-31.8	+ 3	+ 2	376	15.0	- 0.3	+10.5	+11	+ 8
324	13.6	- 4.1	+29.5	- 1	+ 5	377	13.4	- 0.1	- 8.3	- 8	0
325*	14.0	- 4.1	+11.2	- 4	+ 4	378	11.2	0	0	-15	+ 16
326	14.0	- 4.0	- 8.8	-24	- 15	379	14.6	0	- 1.7	-14	+ 10
327	9.0	- 4.0	-16.2	- 3	+ 4	380	14.5	0	-23.1	- 4	+ 11
328	13.4	- 3.8	+ 5.2	- 2	- 1	381	10.2	+ 0.1	+10.8	- 8	+ 10
329	13.3	- 3.7	+ 8.0	+12	0	382	14.0	+ 0.3	- 2.6	- 2	+ 3
330	14.5	- 3.6	+ 3.1	-17	- 3	383	14.0	+ 0.3	-14.8	- 2	+ 8
331	14.6	- 3.5	+26.8	+14	+ 2	384	13.4	+ 0.5	+ 7.2	+ 3	- 10
332	14.8	- 3.2	-28.7	+ 8	+ 2	385	10.9	+ 0.7	+ 6.4	0	- 4
333	14.6	- 3.1	+11.3	-18	- 8	386*	14.0	+ 0.7	- 5.5	- 6	- 3
334	13.4	- 3.0	-34.4	+ 5	+ 4	387	12.2	+ 0.8	+10.8	+21	+ 8
335	14.9	- 3.0	- 8.6	- 4	0						

Continuation of the CATALOGUE

No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
388	14.7	+ 1.0	- 8.0	- 6	- 4	441	13.4	+ 5.4	-28.1	+ 9	+ 4
389	14.6	+ 1.1	+22.6	+ 4	- 6	442	14.9	+ 5.4	-33.0	+ 4	- 2
390	15.0	+ 1.1	- 4.7	+ 2	- 8	443	13.5	+ 5.5	-25.9	-13	- 1
						444	13.0	+ 5.7	+30.0	- 6	+ 14
391	14.0	+ 1.1	-10.8	0	- 3	445	14.0	+ 5.7	- 5.6	+10	- 2
392*	14.0	+ 1.2	+26.1	+ 2	0						
393	11.6	+ 1.3	+27.2	+ 8	+ 6	446	14.6	+ 5.8	-30.7	+10	- 18
394	14.8	+ 1.3	- 9.9	0	+ 1	447	13.2	+ 5.9	+ 0.2	- 1	+ 3
395	14.6	+ 1.6	0	+ 6	+ 2	448	14.0	+ 5.9	-- 6.8	+ 6	+ 2
						449	13.6	+ 5.9	-27.2	-10	- 6
396	14.2	+ 1.6	-10.3	-18	- 2	450	14.4	+ 5.9	-28.6	- 9	+ 8
397	11.4	+ 1.7	-21.2	0	+ 11						
398	13.2	+ 1.8	-29.6	- 5	+ 2	451	14.3	+ 6.0	+24.3	+ 6	+ 5
399	14.9	+ 1.9	+14.1	0	- 2	452	14.5	+ 6.0	-21.4	+ 4	- 8
400	14.6	+ 2.0	+27.4	+11	- 4	453	14.6	+ 6.0	-24.0	+ 3	+ 2
						454	13.5	+ 6.0	-32.8	+ 9	+ 5
401	14.0	+ 2.0	+ 3.0	+ 1	- 14	455	10.7	+ 6.0	-14.8	-22	- 2
402	11.4	+ 2.0	+ 1.2	+ 8	+ 3						
403	13.5	+ 2.4	- 8.9	+ 2	+ 1	456	13.2	+ 6.1	- 3.8	-12	+ 7
404	14.0	+ 2.5	0	- 8	+ 10	457	13.2	+ 6.2	+ 7.9	-10	+ 10
405	13.6	+ 2.5	-28.0	+14	+ 3	458	13.9	+ 6.2	+ 3.6	0	- 4
						459*	13.5	+ 6.2	-15.5	-12	- 6
406	13.3	+ 2.7	+20.1	-12	0	460	11.6	+ 6.3	-28.6	0	- 6
407	13.4	+ 2.7	-19.4	+10	+ 2						
408	13.6	+ 2.7	-31.8	+ 7	- 2	461	13.9	+ 6.4	+ 2.7	-11	- 12
409	12.6	+ 2.7	-34.8	+ 1	- 2	462	14.6	+ 6.5	+14.0	+ 2	- 18
410	13.4	+ 2.8	-34.8	-13	- 14	463	13.2	+ 6.6	- 6.2	+ 5	- 8
						464	12.7	+ 6.6	-27.4	- 2	- 2
411	13.0	+ 3.0	- 6.2	+ 1	- 6	465	14.6	+ 6.9	-20.6	- 6	0
412	12.3	+ 3.2	-16.1	+ 4	- 1						
413	14.4	+ 3.3	- 7.9	- 9	- 3	466	11.9	+ 6.9	-28.0	+ 8	+ 6
414	14.5	+ 3.4	-26.4	-12	- 3	467	13.1	+ 6.9	-25.8	+ 3	+ 4
415	13.6	+ 3.4	-29.9	+16	- 1	468	13.6	+ 6.9	-15.7	-12	- 4
						469	14.2	+ 6.9	-14.6	+ 4	+ 4
416	13.3	+ 3.4	-28.0	+ 2	+ 11	470	13.1	+ 7.0	-31.7	+ 9	- 3
417	13.1	+ 3.5	- 5.7	+ 8	0						
418	13.5	+ 3.6	+34.2	+ 3	- 6	471	14.4	+ 7.1	+10.1	0	+ 3
419	13.3	+ 3.8	+ 7.7	0	- 7	472	13.8	+ 7.1	-25.8	- 6	0
420	12.7	+ 3.8	-15.7	-10	- 8	473	14.5	+ 7.1	-13.8	- 5	- 21
						474	13.3	+ 7.2	- 5.8	- 2	+ 2
421	13.5	+ 3.9	+25.3	- 5	- 14	475	11.6	+ 7.2	-12.4	- 2	+ 4
422	15.0	+ 4.0	+14.8	- 8	- 1						
423	14.8	+ 4.0	-14.6	0	- 5	476	11.6	+ 7.3	+19.8	+ 8	- 4
424	13.0	+ 4.1	+11.4	- 2	+ 2	477	13.9	+ 7.3	-27.4	- 4	- 9
425	12.2	+ 4.1	+10.8	-10	+ 1	478	14.7	+ 7.3	-19.8	- 3	+ 3
						479	14.4	+ 7.3	-22.8	+18	+ 19
426	12.3	+ 4.1	+ 0.4	+ 8	+ 2	480	14.3	+ 7.3	-21.0	+ 9	- 4
427*	13.7	+ 4.2	-20.4	+ 7	+ 7						
428*	13.8	+ 4.2	+ 5.8	+10	+ 4	481	13.0	+ 7.4	-36.1	+ 6	- 18
429	14.6	+ 4.3	+11.4	0	- 20	482	13.6	+ 7.4	-20.4	+ 5	- 16
430	13.4	+ 4.6	-23.6	+ 6	- 4	483*	13.6	+ 7.6	+25.3	+ 1	- 2
						484	12.8	+ 7.6	+ 5.2	+ 6	+ 24
431	14.8	+ 4.8	- 9.8	- 5	- 3	485	13.5	+ 7.6	-36.0	+ 4	0
432	13.5	+ 4.9	+32.0	- 2	- 12						
433*	14.3	+ 5.0	+16.5	- 6	0	486	12.8	+ 7.7	-17.0	- 8	- 8
434	14.6	+ 5.0	-10.3	+ 5	+ 1	487	13.8	+ 7.8	+26.2	+ 7	0
435	14.4	+ 5.0	+ 3.2	+ 1	- 10	488	13.7	+ 8.0	-28.1	- 8	+ 7
						489	13.6	+ 8.0	-26.5	- 4	+ 1
436	14.7	+ 5.2	+22.5	-10	- 9	490	12.8	+ 8.0	- 8.9	0	- 12
437	14.4	+ 5.2	+16.0	- 9	- 6						
438	12.7	+ 5.2	+10.1	- 4	- 10	491	14.2	+ 8.0	-14.4	-11	- 12
439	13.4	+ 5.2	- 9.5	- 1	- 5	492	14.4	+ 8.0	-15.8	+11	- 12
440	14.2	+ 5.3	+19.9	0	+ 14	493	14.0	+ 8.2	-26.3	0	- 2

Continuation of the CATALOGUE

No. of the star	m_{pg}	No. of the star				m_{pg}					
		x	y	μ_x	μ_y		x	y	μ_x	μ_y	
491	12.6	+ 8.2	+ 2.4	+ 8	+ 9	516	13.2	+12.1	-10.2	+ 13	+ 3
495	13.1	+ 8.2	-12.8	- 7	-12	517	14.1	+12.1	-28.3	+ 1	+ 2
						518	13.1	+12.7	-18.4	+ 8	0
496	13.5	+ 8.2	-20.8	+11	-24	519	14.3	+12.8	-14.8	- 5	- 7
497	14.9	+ 8.3	+12.2	+ 4	+ 6	520	14.2	+12.8	-25.1	+ 4	-13
498	14.0	+ 8.4	+23.8	- 1	+ 7						
499	12.0	+ 8.6	-24.8	0	+ 5	521	13.6	+12.9	-22.8	+ 8	+ 8
500*	13.5	+ 8.8	- 6.5	- 3	+14	522	14.3	+13.0	+18.0	- 2	-10
						523	12.7	+13.0	+10.4	+ 2	+ 5
501	14.7	+ 8.8	-17.1	- 5	+ 2	524	13.9	+13.0	-- 9.6	0	0
502	13.8	+ 8.8	-29.5	+12	+ 2	525	13.6	+13.5	-19.6	- 3	+ 6
503	14.0	+ 8.9	+24.2	+ 2	0						
504	14.6	+ 8.9	-14.8	- 5	- 8	526	13.9	+13.5	-19.0	-12	- 5
505	14.7	+ 8.9	-18.8	-10	+ 5	527	13.1	+13.7	-29.8	+ 6	-26
						528	13.4	+14.0	+26.8	+15	+ 18
506	14.0	+ 9.0	- 9.8	- 2	- 1	529	14.0	+14.0	+12.2	+ 8	+ 12
507	+14.0	+ 9.0	+16.8	+ 4	0	530	13.0	+14.0	-22.7	- 8	- 2
508	14.2	+ 9.0	-17.5	+ 6	-14						
509	13.1	+ 9.0	-16.7	+ 6	+ 8	531*	13.6	+14.0	-21.2	+ 2	- 3
510	15.0	+ 9.1	+ 0.4	+10	- 5	532	14.7	+14.0	-31.9	-14	- 4
						533	13.5	+14.2	-- 3.7	- 2	+ 2
511	14.0	+ 9.1	- 1.8	-14	0	534	13.9	+14.2	-17.8	+14	-10
512	13.0	+ 9.2	+25.3	+ 4	0	535*	13.6	+14.2	-10.8	- 2	- 4
513	15.0	+ 9.3	+ 0.8	+ 6	+15						
514	14.7	+ 9.3	+ 6.0	+ 2	- 4	536	14.0	+14.3	-32.0	0	0
515	13.3	+ 9.5	-35.2	+ 2	- 3	537	15.0	+14.4	+ 0.2	+ 8	+ 2
						538	13.8	+14.4	-25.5	+ 3	+ 2
516	13.6	+ 9.6	+25.2	- 4	-14	539	14.0	+14.6	+17.6	- 6	+ 2
517	14.4	+ 9.8	-27.0	-12	-21	540	13.5	+14.6	+ 1.8	0	- 4
518*	13.9	+ 9.8	+12.2	- 7	0						
519	14.1	+ 9.9	- 7.4	-14	- 8	541	14.0	+14.6	-10.1	- 4	- 6
520	13.7	+10.0	-12.4	- 8	+ 8	542	13.2	+14.6	-20.2	- 1	- 8
						543	14.5	+14.6	-30.7	+ 5	- 6
521	11.2	+10.0	-16.4	+ 6	+ 2	544	11.2	+14.8	+ 6.6	-10	+ 14
522*	13.6	+10.0	-27.8	- 2	-18	545	10.9	+14.9	-21.8	-11	- 2
523	14.4	+10.0	+17.8	+ 2	-12						
524	13.5	+10.1	+24.2	+ 6	- 6	546	14.2	+15.0	-22.9	+ 2	-12
525	14.7	+10.2	-27.8	+12	0	547	12.4	+15.1	+28.0	- 2	+ 4
						548	14.0	+15.2	+29.0	+ 1	- 2
526	13.6	+10.3	+27.1	+ 6	+ 6	549	13.1	+15.2	-14.4	+17	+ 8
527	13.2	+10.3	+ 7.4	- 1	+11	550	14.5	+15.2	- 7.0	+ 6	- 4
528	13.6	+10.4	-16.9	+ 2	+ 6						
529	14.4	+10.5	-31.8	-10	- 8	551	14.9	+15.3	+14.2	-- 8	- 7
530	13.2	+10.7	+ 7.8	-16	+ 8	552	15.0	+15.5	+30.8	+20	+11
						553*	13.4	+15.5	+20.2	+ 2	0
531	13.8	+10.8	+30.4	+ 6	+ 1	554	14.7	+15.5	+14.2	+11	+ 4
532	14.3	+11.0	-12.9	+23	0	555	14.1	+15.5	-24.8	+18	- 4
533	13.2	+11.0	-31.8	+ 6	-10						
534	13.0	+11.2	+29.8	- 2	- 2	556	14.0	+15.7	+17.4	+ 1	+ 10
535	12.4	+11.4	+ 8.2	- 4	+ 6	557	14.2	+15.8	+26.6	0	0
						558	13.0	+15.8	-12.1	0	-14
536	14.0	+11.4	-31.6	-12	-31	559*	13.9	+15.9	- 4.0	+ 4	+ 2
537	13.9	+11.7	- 7.0	- 6	+ 6	559	14.2	+15.9	-25.2	+11	-14
538	14.0	+11.8	-27.8	+ 7	- 6						
539	14.6	+11.8	-15.8	+ 8	-22	560	13.0	+16.0	-23.5	0	+ 10
540	13.5	+11.9	+ 4.7	+ 4	+10	561	13.3	+16.0	+18.2	- 9	+ 6
						562	11.2	+16.0	-30.3	+16	+12
541	13.4	+12.0	+22.6	+ 5	- 4	563	13.0	+16.2	- 7.4	-16	+ 8
542	14.5	+12.0	+15.2	-11	- 2	564	14.6	+16.3	-15.7	0	- 4
543*	14.0	+12.2	+ 3.4	+ 1	+ 4						
544	14.2	+12.2	- 7.8	+ 6	0	565	13.1	+16.4	-14.6	- 6	- 6
545	13.1	+12.3	-18.2	- 5	-10	566	13.4	+16.4	- 7.8	- 2	- 8

Continuation of the CATALOGUE

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No. of the star	m_{pg}	X	Y	μ_x	μ_x	No. of the star	m_{pg}	X	Y	μ_x	μ_x	
598	13.6	+16.4	-10.8	-2	+	651	13.2	+19.8	-14.8	-14	+	3
599	14.8	+16.4	-23.5	-6	+	652	13.7	+19.8	-11.4	-4	-	6
600	14.6	+16.5	-29.8	+2	-	653	14.6	+19.8	-26.7	0	+	2
						654	14.9	+19.9	-4.6	+10	+	14
						655	13.0	+19.9	-17.8	-2	0	
601	12.7	+16.6	+25.6	+5	+	656	12.6	+20.0	+18.1	+6	-	6
602	14.9	+16.6	+11.1	-10	-	657	14.2	+20.0	-5.2	+4	-	8
603	14.2	+16.7	+4.7	+10	-	658	14.9	+20.0	-27.7	+10	-	4
604	14.7	+16.7	-19.8	-21	-	659	13.9	+20.1	-9.5	+3	+	4
605	12.8	+16.8	+26.2	+18	-	660	12.0	+20.2	-19.6	-12	0	
606	14.2	+16.8	+6.2	+10	-	661	12.8	+20.2	-25.6	+4	-	24
607	14.5	+16.9	-11.8	+4	-	662	14.5	+20.4	+16.5	+11	-	2
608	14.6	+17.0	-0.8	0	+	663	13.6	+20.4	-12.7	-3	-	3
609	14.8	+17.0	-23.2	+4	+	664	13.7	+20.5	+11.8	+15	+	12
610	13.5	+17.0	-22.8	+8	0	665*	13.4	+20.5	+1.2	+3	-	1
611	14.1	+17.1	-25.8	+7	+	666	13.7	+20.5	-7.8	-3	0	
612	14.0	+17.1	-27.2	+4	+	667	14.8	+20.6	+0.4	0	-	4
613	12.0	+17.1	-24.5	-4	+	668	13.7	+20.6	-3.8	-5	-	12
614	13.1	+17.1	-17.8	-15	+	669	13.5	+20.6	-2.7	-8	-	6
615	13.9	+17.2	-24.4	+11	+	670	14.9	+20.7	-2.6	-3	-	17
616	13.3	+17.3	-31.1	+6	+	671	13.3	+20.8	+23.5	+18	+	2
617	13.1	+17.3	-30.2	0	+	672	13.1	+20.8	+19.8	+8	-	3
618	14.0	+17.4	-25.5	-4	-	673	13.9	+21.1	+8.4	+14	-	4
619	14.6	+17.5	-1.8	-8	-	674	13.1	+21.2	+17.6	0	-	4
620	14.2	+17.7	-10.9	-5	-	675	14.7	+21.3	+3.2	-2	-	5
621	13.4	+17.8	-8.8	+8	+	676	13.2	+21.3	-15.0	-3	-	1
622	12.6	+17.8	+2.2	-2	-	677	13.5	+21.4	-17.7	0	-	2
623	14.6	+17.9	+19.4	+18	-	678	12.2	+21.6	+24.7	+2	+	4
624	13.0	+17.9	+4.3	-4	-	679	14.3	+21.8	-9.8	+1	-	6
625	14.0	+17.9	+2.2	-3	-	680	13.9	+21.8	-28.9	+2	+	6
626	13.3	+18.0	+23.2	-10	-	681	13.2	+21.9	-12.1	+18	+	6
627	13.1	+18.0	+13.8	+9	-	682	12.6	+22.0	+26.2	+3	-	24
628	14.0	+18.0	+4.0	-14	-	683	14.7	+22.0	+3.6	-2	+	8
629	14.0	+18.0	+7.0	-12	+	684	15.0	+22.0	+0.4	+5	-	2
630	13.5	+18.0	-4.8	-2	-	685	14.5	+22.0	-7.8	+2	-	3
631	14.0	+18.0	-26.7	+4	-	686	13.3	+22.0	-26.8	0	-	2
632	13.2	+18.1	-11.4	-8	-	687	14.8	+22.0	-23.7	+2	-	10
633	13.9	+18.2	+10.2	+10	-	688	12.4	+22.1	+18.5	-8	-	4
634	14.2	+18.2	+3.8	+3	-	689	14.5	+22.1	-5.2	+6	+	10
635	13.2	+18.2	-5.8	+10	-	690	14.6	+22.2	-8.0	+12	-	4
636	14.6	+18.3	+25.6	0	-	691	14.0	+22.2	+1.5	+1	-	7
637	14.0	+18.5	+5.2	-2	-	692	13.4	+22.3	+26.6	+10	-	4
638	13.2	+18.6	-10.8	+16	-	693	14.9	+22.3	+18.9	-5	+	1
639	13.4	+18.6	-15.5	-11	-	694	14.6	+22.3	+5.0	-8	+	8
640	12.3	+18.7	+6.8	-6	+	695	12.0	+22.3	-21.1	-2	+	2
641	13.2	+18.8	+11.7	+2	-	696	13.4	+22.3	-7.3	0	-	6
642	12.7	+18.8	-7.1	+6	-	697	13.8	+22.5	+7.2	-6	+	9
643	12.8	+19.0	+21.0	+4	+	698	14.6	+22.7	+19.4	-2	+	3
644	11.9	+19.2	+19.4	-8	+	699	13.8	+22.7	-12.0	+2	+	4
645	13.1	+19.2	-14.7	-7	-	700	14.2	+22.7	-23.5	+8	0	
646	14.6	+19.2	-25.2	+12	-	701	15.0	+22.8	+10.8	-2	-	6
647	14.6	+19.3	-11.9	-19	-	702	13.3	+22.8	-23.9	+3	-	2
648	13.1	+19.3	+27.8	+7	+	703	14.6	+22.9	-8.7	-2	+	2
649*	13.8	+19.7	-16.8	+5	+							
650	13.0	+19.8	+11.5	+10	-							

Continuation of the CATALOGUE

No. of the star	m_{pg}	X	Y	μ_x	μ_y	No. of the star	m_{pg}	X	Y	μ_x	μ_y
704	14.0	+ 23.0	+ 3.8	+ 16	- 2	751	14.6	+ 27.7	+ 6.4	+ 6	- 4
705*	13.8	+ 23.2	+ 13.8	- 4	- 2	752	13.8	+ 27.8	+ 7.9	- 2	- 10
706	13.3	+ 23.3	- 27.4	- 14	- 8	753	13.5	+ 28.3	- 4.8	+ 6	- 2
707	14.1	+ 23.4	- 1.0	- 2	- 4	754	14.3	+ 28.3	- 5.4	- 6	- 4
708	14.6	+ 23.5	- 11.4	- 8	- 2	755	14.5	+ 28.4	- 17.8	- 8	+ 5
709	14.4	+ 23.8	+ 15.9	- 4	+ 1	756*	13.6	+ 28.5	- 7.6	+ 5	+ 4
710	11.4	+ 23.9	- 27.4	- 6	+ 6	757	14.6	+ 28.8	- 9.3	+ 4	+ 1
						758	13.6	+ 28.9	+ 14.1	+ 2	0
711	11.4	+ 24.0	+ 16.1	+ 8	- 4	759	14.9	+ 29.0	+ 4.9	+ 12	- 2
712	13.8	+ 24.0	+ 0.7	- 6	0	760	13.6	+ 29.2	- 20.5	- 8	- 2
713	14.6	+ 24.1	- 22.6	+ 3	- 9	761	12.2	+ 29.3	- 6.2	- 4	+ 5
714	14.8	+ 24.2	- 25.7	+ 19	+ 10	762	13.2	+ 29.5	- 10.8	- 5	- 6
715	11.3	+ 24.3	+ 14.2	+ 6	+ 1	763	14.3	+ 29.7	- 17.8	+ 20	- 4
						764	13.1	+ 29.9	- 5.0	+ 7	- 4
716	15.0	+ 24.6	- 7.0	+ 25	+ 3	765	14.6	+ 30.0	- 16.9	- 4	- 1
717	14.2	+ 24.6	- 9.8	+ 0	0	766	11.4	+ 30.1	+ 16.5	+ 3	+ 3
718	15.0	+ 24.7	- 7.3	+ 24	0	767	14.8	+ 30.1	+ 6.3	+ 5	- 10
719	14.8	+ 24.7	- 4.7	+ 14	- 2	768	13.4	+ 30.2	+ 5.2	0	+ 16
720	14.0	+ 24.8	- 8.0	+ 6	0	769	11.4	+ 30.2	- 8.8	+ 2	+ 9
						770	14.0	+ 30.5	+ 7.8	0	0
721	13.6	+ 24.9	- 21.1	- 4	- 24	771*	13.8	+ 30.7	+ 7.7	+ 16	- 6
722	15.0	+ 25.1	+ 5.9	+ 7	+ 3	772	14.6	+ 30.7	- 7.0	- 6	- 4
723	14.6	+ 25.2	- 10.4	- 8	+ 9	773	12.7	+ 30.8	- 12.0	0	0
724	14.9	+ 25.3	- 10.8	+ 2	- 9	774	11.7	+ 31.0	- 14.7	+ 6	+ 3
725	14.7	+ 25.3	- 10.2	+ 1	+ 14	775	12.7	+ 31.3	- 4.2	+ 1	0
						776	13.2	+ 31.4	- 8.8	+ 6	- 4
726	14.1	+ 25.3	- 17.0	+ 12	+ 6	777	13.3	+ 31.7	+ 7.5	- 6	- 14
727	15.0	+ 25.4	- 10.8	+ 11	- 2	778	14.4	+ 31.8	+ 2.6	- 8	- 2
728	15.0	+ 25.7	- 4.7	- 1	+ 6	779	13.9	+ 31.8	- 15.1	+ 3	+ 2
729	13.1	+ 25.8	- 17.8	- 22	- 30	780	14.5	+ 32.0	- 3.5	- 13	+ 19
730	13.1	+ 25.9	- 0.6	+ 2	- 10						
						781	14.0	+ 32.1	- 13.2	+ 12	- 3
731	14.6	+ 26.0	+ 2.2	+ 5	- 2	782	12.8	+ 32.2	- 10.9	+ 3	+ 2
732	14.7	+ 25.0	+ 1.9	+ 8	+ 1	783	13.9	+ 32.3	+ 6.8	+ 12	+ 13
733	14.7	+ 26.0	- 13.8	- 6	+ 9	784	14.3	+ 32.3	- 0.7	+ 13	+ 8
734	14.3	+ 26.1	+ 4.0	- 4	+ 6	785	14.6	+ 32.7	+ 7.9	- 3	+ 2
735	15.0	+ 26.4	- 4.9	+ 7	+ 9						
						786	13.1	+ 32.7	- 10.1	- 3	- 10
736	14.0	+ 26.4	- 11.7	+ 6	+ 4	787	14.8	+ 33.0	- 3.6	- 6	- 2
737	13.4	+ 26.6	+ 15.4	+ 6	0	788	13.3	+ 33.0	- 7.0	0	+ 2
738	14.9	+ 26.6	+ 1.9	0	+ 2	789	13.3	+ 33.2	+ 1.3	+ 10	+ 8
739	13.3	+ 26.8	+ 15.6	- 4	0	790	11.1	+ 33.3	- 10.2	+ 26	- 2
740	14.0	+ 26.8	+ 10.1	+ 21	- 14						
						791	12.3	+ 34.0	- 9.5	- 12	+ 6
741	14.7	+ 26.8	- 21.2	- 1	- 7	792	14.0	+ 34.8	+ 1.4	+ 2	+ 2
742	14.3	+ 26.9	+ 21.1	- 7	0	793	14.4	+ 34.8	+ 0.8	+ 3	+ 2
743	13.5	+ 26.9	+ 14.3	+ 2	- 2	794	14.3	+ 34.9	+ 2.2	+ 12	0
744	14.6	+ 26.9	+ 5.6	- 2	+ 7	795	14.5	+ 34.9	- 8.6	- 4	+ 14
745	13.8	+ 27.0	+ 1.9	0	- 4						
						796	14.1	+ 34.9	- 3.7	+ 6	+ 4
746	12.5	+ 27.1	- 3.2	+ 4	+ 9	797	12.8	+ 35.0	- 4.5	+ 6	+ 4
747	14.2	+ 27.3	+ 5.4	+ 9	- 3	798	13.9	+ 40.4	- 6.4	+ 29	0
748	14.9	+ 27.4	+ 9.2	+ 13	+ 6	799	14.6	+ 40.7	- 5.8	+ 8	0
749	13.1	+ 27.6	+ 4.3	+ 4	- 14	800	12.3	+ 42.0	+ 3.8	- 6	+ 20
750	14.6	+ 27.6	+ 19.3	+ 24	- 10						

Stars with large proper motions

1	13.9	- 32.8	+ 5.4	- 16	- 46	6	14.5	0	+ 6.2	0	- 39
2	12.7	- 23.4	+ 17.4	+ 19	- 62	7	8.8	+ 14.1	- 15.7	+ 14	+ 54
3	12.2	- 15.7	+ 29.5	+ 90	- 42	8	14.2	+ 24.3	- 25.4	+ 31	- 16
4	14.6	- 10.5	+ 2.6	+ 12	- 36	9	13.5	+ 24.8	- 18.8	- 19	- 40
5	14.5	- 7.4	+ 26.0	- 6	- 118						